FAA17001-R.3115A

Nikon FE2

ニコン FE2

REPAIR MANUAL

修 理 指 針

NIPPON KOGAKU K.K.

Tokyo, Japan

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SPECIFICATIONS

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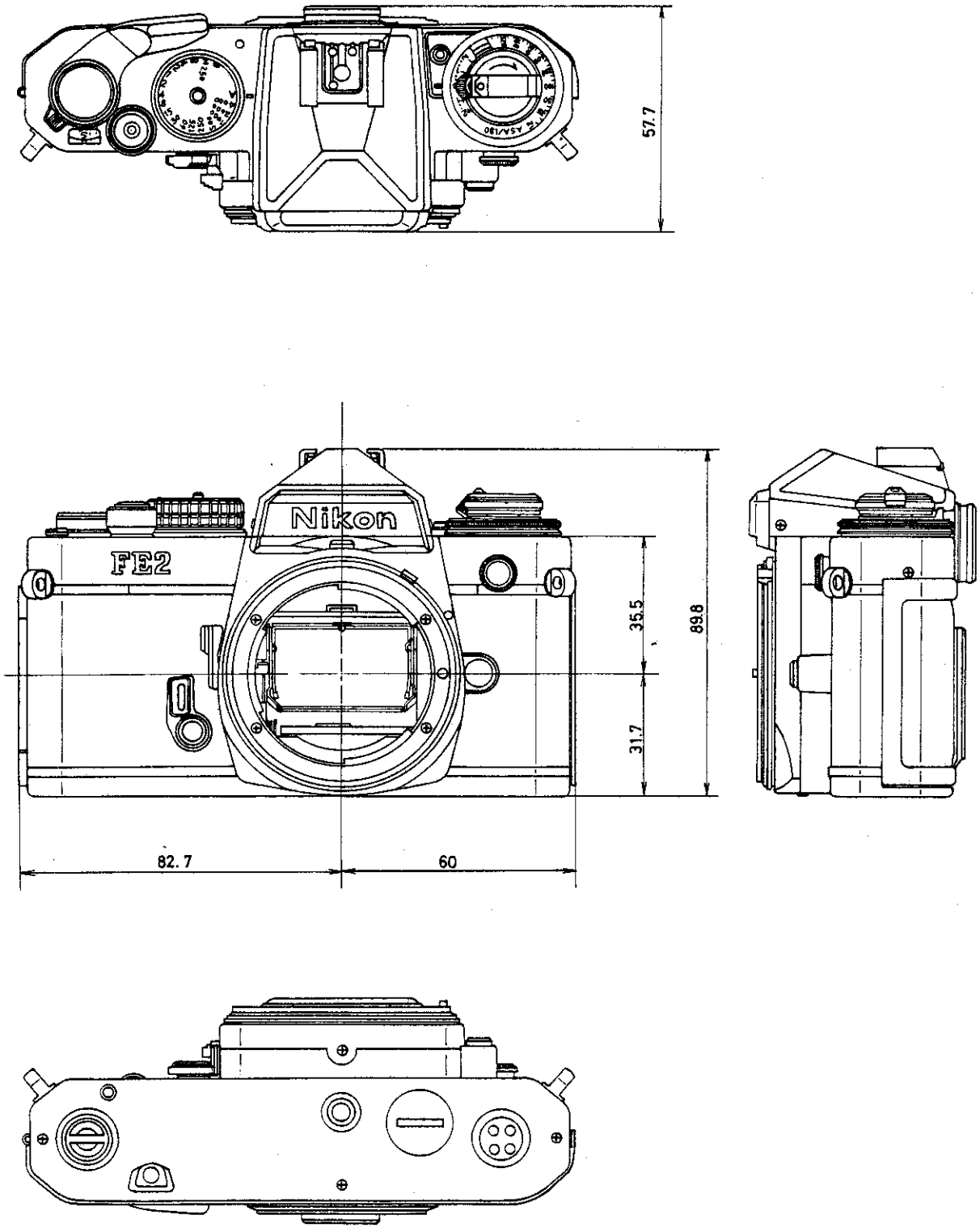
[2] SPECIFICATIONS M2

[3] DRAWING OF COMPLETE CAMERA SECTION

〔1〕外観図 Figure of External

FAA17001-R. 3115. A



[2] SPECIFICATIONS

Type of camera: Electronically controlled 35mm single-lens reflex (SLR) focal plane shutter camera

Usable film: Any cartridge-type 35mm film

Picture format: 24mmx36mm

Lens Mount: Nikon bayonet mount; meter coupling lever provided; meter coupling lever release button not provided

Shutter: Electronically controlled vertical-travel, metal-focal-plane shutter with titanium curtains

Shutter speeds: On Auto: stepless speeds from 8 to 1/4000sec.
On Manual: 16 quartz-controlled speeds from 8 to 1/4000sec.
On Mechanical: M250 (1/250sec.); B for long exposure

Viewfinder: Fixed eyelevel pentaprism type, 0.86X magnification with 50mm lens set at infinity, 93% frame coverage

Focusing screen: Interchangeable matte/Fresnel focusing screen with central split-image rangefinder spot and microprism collar (Nikon Type K2) as standard; two other types of screens available optionally (Type B2 and E2)

Viewfinder display: Shutter speed scale, ADR aperture f-number in use, exposure compensation mark, meter needle (black), shutter speed/exposure mode indication needle (green), outside-exposure-range warning marks

Reflex mirror: Automatic instant-return mirror

Automatic Maximum Aperture Indexing (AI): Provided

Exposure metering: Through-the-lens (TTL) center-weighted full aperture exposure measuring system using a pair of SPD's (silicon photodiode)

Metering range: EV1 to EV18 (f/1.4 at 1sec. to f/8 at 1/4000sec. with 50mm f/1.4 lens at ASA/ISO 100)

Photo diode: Three SPD's for metering, TTL automatic flash output control

Film speed range: ASA/ISO 12 to 4000

Exposure compensation: Via dial provided; -2EV to +2EV in one-third increments

Exposure memory lock: Via self-timer lever

Film-advance lever: Single stroke; 30° stand-off angle and 135° winding angle

Automatic film wind: Possible with MD-12 Motor Drive

Frame counter: Additive type; automatically resets "S", three frames before "1", when camera back is opened;on auto mode, shutter speed is automatically set to 1/250sec. until frame "1" is reached during blank exposures

Film rewind: Via film rewind crank rotated after rewind button is depressed

Self-timer: Mechanical type; approx. 10sec.-exposure delay; setting "cancellable"

Aperture coupling: Instant resets maximum aperture, depth-of-field preview button provided

Multiple exposure: Via lever

Flash sync: On Auto: 1/250sec.
On Manual: Sync with electronic flash unit at 1/250sec. or lower, or at 1/250sec. only when shutter speed dial is set between 1/500sec. and 1/4000sec., sync with flashbulb at 1/30sec. or lower

Accessory shoe: Standard ISO type; hot shoe, ready-light, monitor and TTL control contacts provided

Ready-light: LED visible inside viewfinder; lights up when SB-16B, SB-15 or SB-E Speedlight Unit is fully charged; blinks to warn that the distance between subject and SB-16B or SB-15 Speedlight reaches the working limitation of SB-16B or SB-15 on TTL mode

Camera back: Interchangeable with MF-16 or MF-12 Data Back; pops open when the film rewind knob is pulled up as camera back is pushed counterclockwise; hinged type; memo holder provided

Power source: Three types usable;
3V lithium battery (CR-1/3N type)x1
1.55V silver-oxide battery (S-76 or SR44 type)x2
1.5V alkaline-manganese battery (LR-44 type)x2

Exposure meter switch: Depressing shutter release button halfway turns on; meter stays on for 16sec. after finger is lifted off button, then automatically turns off; when MD-12 attached, depressing the MD-12's trigger button halfway turns off approx. 66 seconds later

Battery consumption: In storage: Approx. 4μA
Metering: Approx. 5mA
Shutter releasing: Approx. 14mA
Exposure compensation LED lighting:
Approx. 1mA

Battery check: By observing the meter needle movement;
shutter locked at battery exhaustion;
unlocked by shutter dial M250/B setting

Dimensions (body only): Approx. 142.5mm(W)x90.0mm(H)x57.5mm(D)

Weight (body only): Approx. 550g

DISASSEMBLING & ASSEMBLING & ADJUSTMENTS

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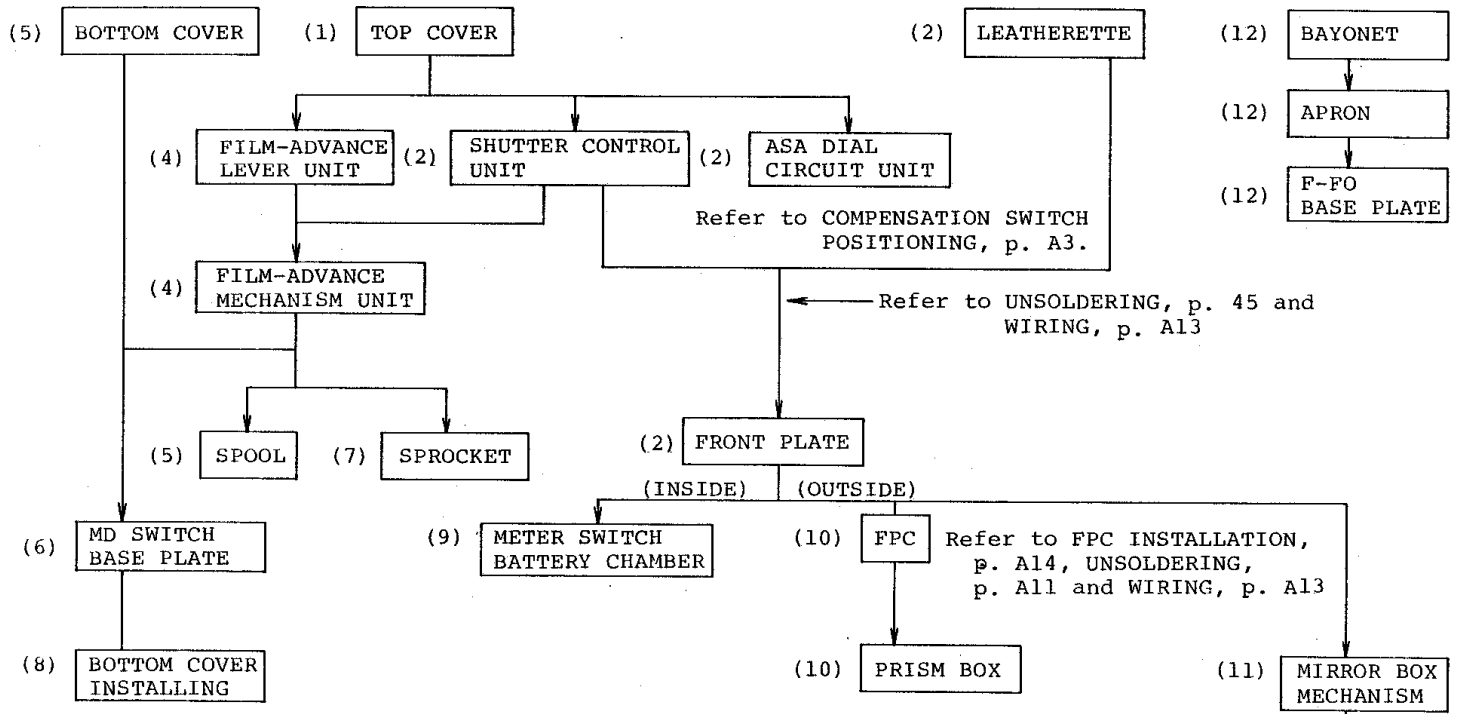
[1] DISASSEMBLING OUTLINE



NOTE: 1) Numbers in parentheses are those of disassembling procedures.

2) Repair manual for the Nikon FM2 may help complete disassembling.

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[2] DISASSEMBLING PROCEDURE

(1) TOP COVER Fig. 1

Film-advance lever B407

Leatherette #402

Screw, film-advance lever #403

Fig.10
Shutter dial unit B 501

Screws #579x3

Fig.6
Rewind knob #563
B027
#573

Rewind crank spring #566

Washer #570

Friction spring #521

Rewind shaft #511

O.C. knob #523

Ring #518

ASA dial unit B603

Rewind knob lock lever B029

Shaft, rewind lock lever #544

⊕ #672 x 2

Retainer, ASA calibration ring #542

Ring, ASA dial mounting #B031

⊕ #676 x 3

Top cover B026

⊕ #603 x 3

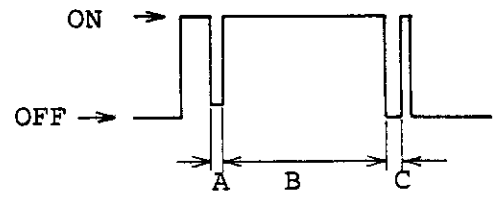
⊕ #670 x 2

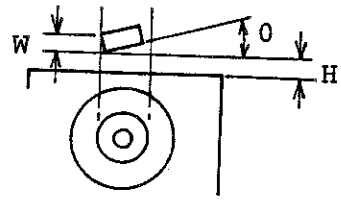
Multiexposure knob #491

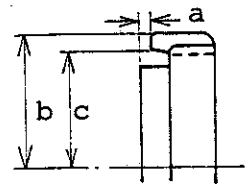
Washer #493

Cover ring, shutter dial #35

Spring, film-advance lever reverse #406

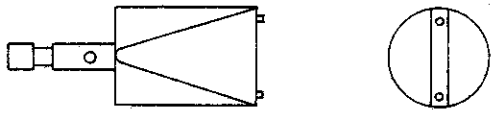
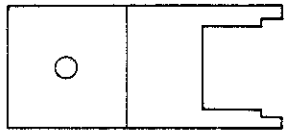
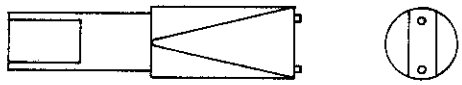
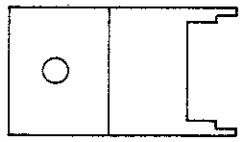
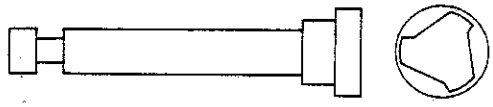
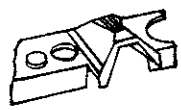
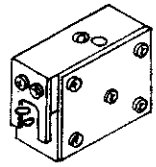
	Item	Standard	Tool
METER	Tolerance	±0.5 EV or less	J18041-1
SYNCHRONIZATION	Time-lag	0.118 - 0.261ms	J19028-1
	Contact efficiency	60% or more (gate time: 1ms, 1/250 sec. or less) 70% or more (gate time: 2.5ms, 1/30 sec. or less)	J15166
	Insulation resistance	30 MΩ or more (500V)	J9006
TTL LIGHT OUTPUT CONTROL	Ready-light	To be turned on when fully charged	SB-15
	ASA setting error warning	ASA 400 or lower: Ready-light glows (TTL mode) ASA 800 or higher: Ready-light blinks (TTL mode)	J18142 J15225
	Ready-light function for the Speedlight SB-15	Shutter dial setting / MODE: TTL / A.M MD Auto: Glowing / Glowing 1/4000 - 8: Glowing / Glowing M250,B: Blinking / Glowing	J15164 J9001-5 J15196
	Ready-light LED blinking after flash	To be blinking when the SB-15 provides a full output on TTL mode To be blinking while the SB-15 is being charged	
	Output stop signal time	EV15 / ASA 50 / F1.4 200 ± 25 μs	
	Double fire for slow shutter speed	To be released at 1 sec. or lower Not to fire when ready-light lights up with X contact on	
BATTERY CONSUMPTION	Consumption rate (normal temperature)	Metering : 7 mA or less Shutter releasing: 18.5 mA or less In storage : 8 μA or less	J9001-5 J9003-1 J15164
DATA BACK CONTACT	Synchronization	All shutter dial settings A: 2ms or less (Chattering at ON) B: 20ms or more (Synchronization) C: 10ms or less (Chattering at OFF)  Not to turn on within 150ms after synchronization	Oscilloscope

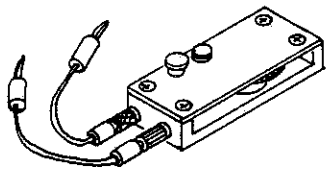
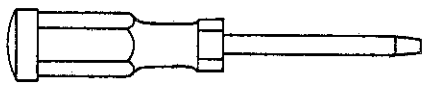
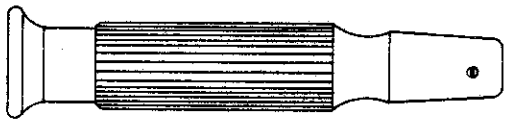
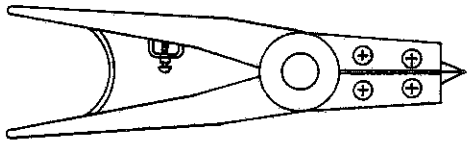
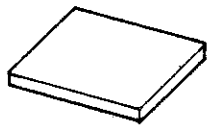
	Item	Standard	Tool
VIEWFINDER	Infinity focus	±20" Shutter charge should not affect the infinity focus accuracy.	J18006 J18010
	Parallax error	0.5mm or less vertically / horizontally	J9008
	Viewfinder coverage	93^{+3}_{-1} %	
	Parallax	0.5° or less	
	Diopter	-1 ±0.5 dpt.	
	Image inclination/ centering	Inclination: 1° or less Centering : 0.3mm or less	
	Shutter speeds indication	Shutter speeds inner indicator: Not to protrude in the viewfinder frame Step : 0.2mm or less Inclination: 0.1 mm or less	
		Meter needle indication Rest position : Lower than mark "B" Top position : Upper than the center of mark "A" Bottom position: Lower than the center of mark "B"	
		Meter needle/green needle extension Longest : To double width of panel of indicator Shortest: To reach calibrations of indicator Meter needle should extend longer than green needle.	
		Green needle indication: To keep a clearance between two adjacent calibrations.	
	Exposure compensation LED position	To be aligned with the width of sprit image. To be visible at eyepoint.	Tool for eyepoint
	ADR window position	Height (H)=1/2 W or less Inclination: 2° or less To be aligned with the width of sprit image. Adjacent numbers should not appear at F5.6 	
BATTERY CHECK	Shutter lock voltage	To be locked at 2.32 - 2.4V	
	Minimum voltage for shutter operation	3.02 - 3.70V Meter will not be held ON for 16 sec. at this voltage	

	Item	Standard	Tool
LENS MOUNT	Aperture lever height	After mirror charge: $3.1^{+0.1}_{-0}$ mm Before mirror charge: 3.6mm or less Balance between before/after charge: 0.15mm or more	J18004
		Full stroke: 7.1mm or more	
		Tension (mirror charged): 90 - 120g	
	Aperture coupling ring	Rotation angle: 52.5° - 112.5°	J18063
		Torque: 750g-cm or less (forward) 350g-cm or less (reversed)	J18058
		a: $0^{+0.2}_{-0.1}$ mm b: 31.2±0.1mm c: $R30^{+0.4}_{-0.1}$ mm 	Slide caliper
	Flange focal distance	46.67±0.02mm (External film rail) Parallellness: 0.02mm Balance of height between internal and external film rails : 0.23±0.02mm	J18001-1 J19004 —
	Mirror	Clearance (mirror up): 0.2mm or less	
		Mirror return point: 4 - 11mm from the mirror cushion	
		Rising time : 28ms Moving down time: 26ms Mirror bounce : 90ms or less	
ASA/EXPOSURE COMPENSATION	ASA dial	To be locked securely To be aligned with ASA dial scale	
	Exposure compensation LED	To be ON when setting to ±1.3 EV Not to be ON in play of locking at "0"	
	Compensation limit	ASA 12 : +1.3 or less ASA 3200: -1.6 or less	
CAMERA BACK	Pressure plate	Flatness: 0.02mm or less	
	Meter-ON duration	15±1.2 sec. after meter switch off or mirror down	Stop watch

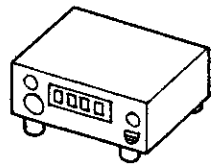
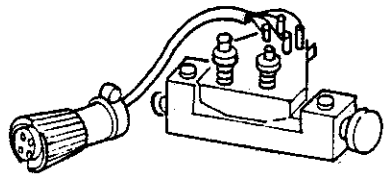
TOOLS

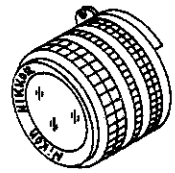
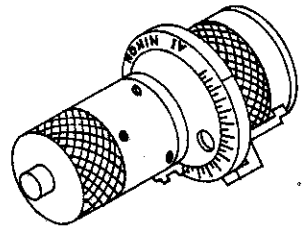
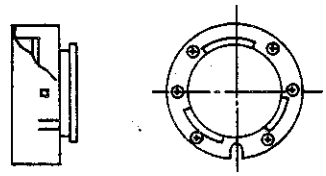
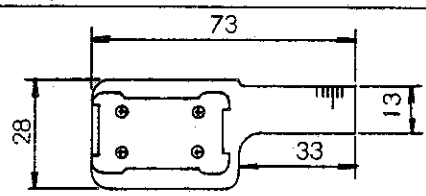
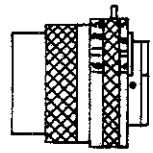
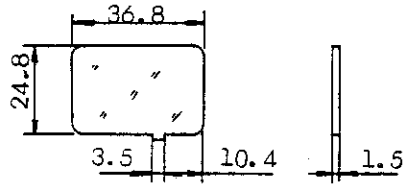
(1) FE2用工具ゲージ一覧表 Tool List

工具番号 Tool No.	名 称 Name	略 図 Illustration	区分 Class.	備 考 Commeon use
J11126	レバー押えネジ #403用 回螺器 Screwdriver (Film-advance lever)		A	FM, FE FM2
J11118	スプロケット軸受 #438用 回螺器 Screwdriver (Spricket shaft lower bearing #438)		B	FM, FE FM2
J11135	絞りレバービス #314用 回螺器 Screwdriver (Aperture lever screw #314)		B	FM FM2
J11139	レバー軸ナット #405用 回螺器 Screwdriver (Film-advance lever shaft nut #405)		B	FM, FE FM2
J11155	スプロ制限カム #429用 回螺器 Screwdriver (Sprocket stopper sam #429)			FM, FE FM2
J15232	輝度校正用 Tool top cover		A	FE2用を加工 FE2専用
J15147	ストロボ代用工具 Tool speed-light		B	FE FM2

工具番号 Tool No.	名　称 Name	略　図 Illustration	区分 Class.	備　考 Commeon use
J18157	回路点検用工具電池 Tool buttery		A	FM2 FM, FE J15148を改造
J15135	高周波ドライバー High-frequency screwdriver	 (J15188 可変抵抗校正用ドライバーも可)	A	先端を加工して使用 When using modfy the tip
J 5127	回螺器ホルダー Screwdriver blade holder		A	
J 5272	ミラーアップレバー Gクリップ #299用 回螺器 Pliers (G-snap ring #299 the mirror-up lever)		A	FM, FE FM2
J15164	裏蓋代用スイッチング工具 Tool for positioning back door		A	F3 FG
J15196	標準反射紙 Standard reflector		A	F3 FG

(2) General purpose instruments

Tool No.	Title	Remarks	Usable other tool
J19040	Shutter tester	For 35mm focal-plane shutter camera with automatic mode	J19036-1
J19028-1	Megger	500M Ω	J19028
J19009-2	Brightness box		J19001-1 J19009-3 J19009-4 J19002-1
J19003-2	Digital multi-meter	Resolving power:1μV/DCV	J9003-3
J19001	Collimator (f=600mm D=120mm)	With stand	J19001-1
J19004	Dial indicator (with stand)	Scale div. 0.01mm, stroke 5mm	
J9006	Test meter		
J9001-5	DC regurated power supply	0 - 18V Variable, Max. 2A	J9001 J9001-1
J18142	Time counter		
J15225	Strobo dummy connector		

Tool No.	Name	Illustration	Class.	Common use
J18004	Aperture lever positioning gauge	Refer to tool instruction manual	B	All cameras
J18006	Test chart		C	"
J18010	Standard lens 50mm f2		C	"
J18033	Focusing screen tool		C	"
J18037	Mirror 45° inspecting tool		C	"
J18041-1	Tool lens for shutter tester 50mm f1, 4		A	EL2 FM FE FM2 F3
J18042	Aperture lever depth gauge	Refer to tool instruction manual	C	All cameras
J18058	Torque gauge for AI lens & body		C	FM2 F3 AI lenses FM EL2 FE
J18063	F-number window checking gauge		B	FM2 F3 FM FE
J18064	Sprocket teeth positioning gauge		B	FM2 FM FE
J18065	F-number checking gauge		A	FM2 FM EL2 FE
J18070	45°degree positioning tool mirror		C	FM2 FE

潤滑油・接着剤一覧表　LUBRICANT AND BINDING AGENT LIST

潤滑油　LUBRICANTS

油 Oil	用途 Usage	番号 Items number	商品名 Items 日本 Japanese	資材コード Material Cord No.	備考 Remarks
液体油 Liqvid oil	常温用 At a normal temperature	L 1233	57Tオイル No.33 (シェル石油)	E 216	
		L 1309	モービ・ルーブ HD 80/90 (モービル石油)	E 223	
		L.1314	モービ・ルーブ HD 140 (〃)	E 224	
	低温用 At a low temperature	L 2010	アストロ・オイル (ウィリアム・F・ナイ)	E 269	
		L 2113	D・O・Sセパケート (三建化工)	E 274	
		L 2115	エクリプス・パイオニア エクリプス・パイオニア#10 (ジャイロ油)		廃止 代用 G7100 G8181
		L 3016	スクワレル LA−10 (理研製油)	E 261	
		L 3025	〃 M−1 (〃)	E 262	
		L 3034	〃 M−2 (〃)	E 263	
		L 3044	〃 M−5 (〃)	E 264	
		L 3047	〃 H−1 (〃)	E 265	
		L 4010	ロジモール・オイルP−2 (ロジモール)	E 2831	
		L 4015	〃 P−2/M0 (〃)	E 2832	
グリース Grease oil	常温用 At a normal temperature	G 6053	パーマルーブ H1003 (日本鉱油)	E 275	
		G 6252	ダフニー・コロネックス No.2 (出光興産)	E 226	16kg入
		G 6433	光学用グリース X−2 (杉浦研究所)	E 2837	
		G 6434	〃 X−3 (〃)	E 2838	G6414の代用
		G 7821	リマックスグリース No.2 (丸善石油)	E 225	
		G 7910	LOSOID 1150E/35019 (ロジモール)	E 2834	
		G 7920	〃 1160B (〃)	E 2835	
		G 7930	モービラックスグリース No.2 (モービル)	E 2852	
		G 7950	No. 502 (和光光学研究所)	E 2839	G5201の代用
		G 7951	機軸用油 (〃)	E 2840	G5204の代用
		G 7952	モリトン CK (住鉱潤滑剤)	E 2841	G5214の代用
	低温用 At a low temperature	G 7100	スクワグリース L−2 (理研製油)	E 266	
		G 7811	フォトルーブ 024 (日本鉱油)	E 272	
		G 7813	フォートルーブ 025 (NK仕様)	E 280	
		G 7814	マルテンプ PS No.1 (協同油脂)	E 276	
		G 7815	〃 PS No.2 (〃)	E 2844	
		G 7816	ホワイトグリースA (トーオーポリマー)	E 2842	(FL−LUBE−A)
		G 7825	イソフレックススーパーテル3000(クルーバー社)	E 2843	
		G 7833	シリコン・グリースSH33(F)(トーレ・シリコーン)	E 2845	
		G 7848	ユニテンプ・グリースEP (日本石油)	E 2846	
		G 7854	パーマルーブ C−1 (〃)	E 2847	
		G 7855	〃 C−2 (〃)	E 2848	
		G 7856	〃 C−3 (〃)	E 2849	
		G 7857	〃 C−3−3 (〃)	E 2850	

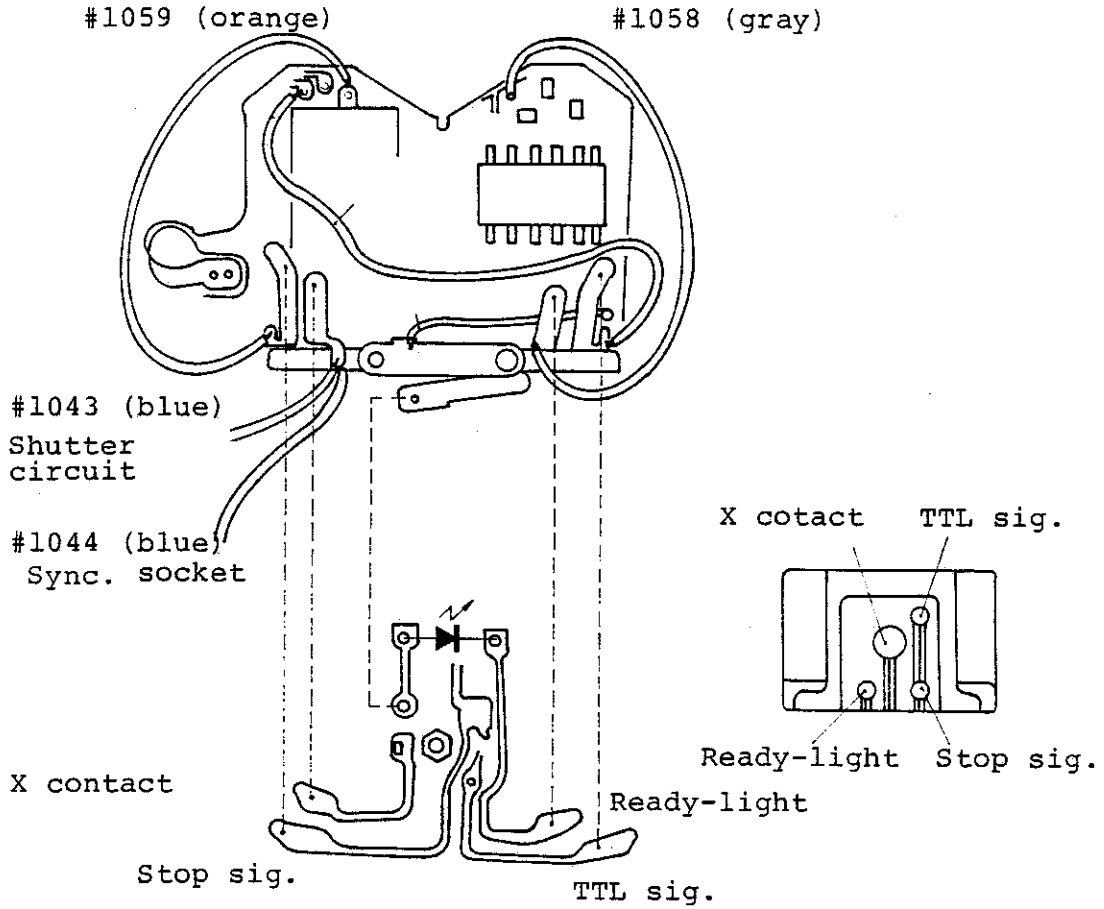
潤滑油　LUBRICANTS

油 Oil	用途 Usage	番号 Items number	商品名 Items 日本 Japanese	資材コード Material Cord No.	備考 Remarks
グリース Grease oil	低温用 At a low temperature	G 7866	フォトルーブ０２３ （日本鉱油）	E 271	
		G 7870	モービル・グリース２８ （モービル石油）	E 2851	
		G 8181	メーカ調合 （ＮＫ仕様）	E 281	
		G 8613	リキモリ・パウダーＬＭ−13（ロックレー）	E 2853	
		G 8800	ＩＪ−10Ａ　ＮＫ仕様 （日本鉱油）	E 282	
		G 7862	パーマルーブ　Ｆ−２		廃止

接着剤　BINDING AGENTS

用途 Usage	番号 Items number	商品名 Items 日本 Japanese	資材コード Materiat Cord No.	備考 Remarks
皮類，ゴム類 For leather or rubber goods.	＃ 501	プライオボンド　＃30	E 154	
	＃ 519	セメダインハイコンタクト	E 174	
	＃ 520	ソニーボンド　ＳＣ306	E 183	
一般金属相互 ガラスと金属 For make metal goods together with metal goods or glass with metal	＃ 420	ハードロック　Ｅ 510	E 187	1：1
	＃ 616	セメダインスーパー　7mℓ入	E 153	同じ物
		セメダイン　＃1500家庭用40mℓ入	E 171	
	＃ 621	主剤ーセメダイン　＃1565　500ｇ入	E 175	1：1～1.5
		硬化剤ーポリサルファイト　500ｇ入	E 176	
	＃ 622	主剤ーセメダイン　＃1565　500ｇ入	E 175	100：10～20
		硬化剤ーD液（ポリアミン）　500ｇ入	E 178	
	＃ 631	アラルダイト　ＡＴ１	E 180	
	＃ 645	主　剤ーＤＭＫ５．	E 160	100：12
		硬化剤ーＨＬ105	E 161	
	＃ 648	セメダイン　＃1590 ハイスーパー　15ｇ入	E 173	1：1
	＃ 649	主剤ーアラルダイト　ＡＷ106	E 181	10：8（体積比）
		硬化剤ーＨＶ953Ｕ	E 182	1：1
工程上の仮止め For temporary adhesion in the process				
	＃ 350	ネジロック（赤・白）　200ｇ入	E 157	
	＃ 410	ロックタイト (B/M黄、ST/L赤、N/L青、SC/L柴)　50cc入	(黄)E163,(赤)E164,(青)E165,(柴)E166	
	＃ 921	アロンアルファ　＃ 201	E 155	(20ｇ入)
	＃ 922	〃　＃ 202	E 156	(20ｇ入)
充填を主とする接着 For replenishment	＃ 503	ウェザーパンシーラー　3ℓ入	E 185	
	＃ 515	ＫＥ45ＲＴＶ　（黒・白）　100ｇ入	E 186	
	＃ 516	スリーボンド　1104　1kg入	E 184	
	＃ 701	セメダイン　1001　500g入	E 179	
	＃ 520	ソニーボンド　ＳＣ306	E 183	
	＃ 519	セメダインハイコンタクト	E 147	

(1-1) WIRING OF SINC. CONTACT



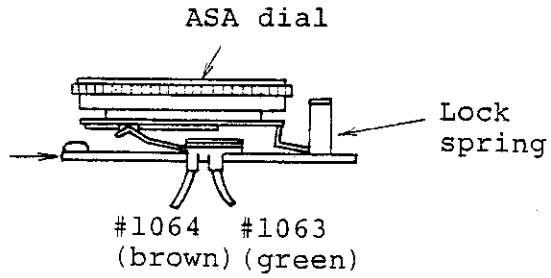
In order to avoid noise production,
Separate two X-contact lead wires #1043 and #1044 (blue) from the other lead wires and route them to cross the circuit pattern to SPD.

(1-2) EXPOSURE COMPENSATION WARNING SWITCH CHECKING

Check the contact between ASA contact brush B604 and ASA dial B603. See if the switch remains off while the compensation dial is set to "0" and turns on when set even at ±1/3 EV.

Adjustment:

Adjustments can be made by changing the relative position between B603 and B604 after loosening the screw of lock spring.



EXPLOSION DRAWINGS

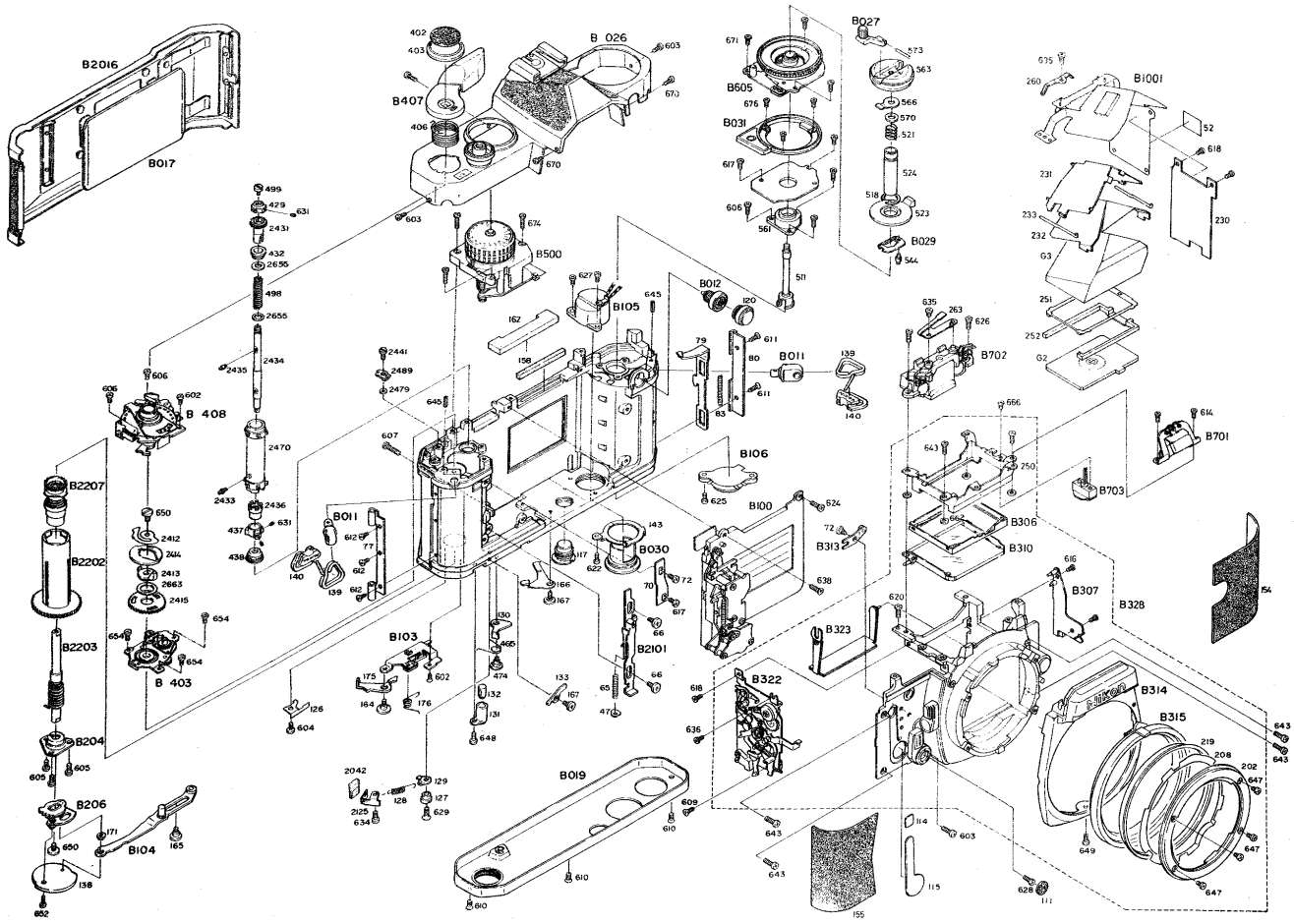
Contents Page

Drawings of Complate Camera Section

Top Cover F1
Film-advance Lever Unit F2
Film-advance Mechanism Unit F3
Film-advance shaft / Sprocket F4
Shutter Control Unit F5
Rewind F6
Bayonet F7
Pentagonal Prism F8
Front Plate (1) F9
Front PLate (2) F10
Body F11
Bottom Cover F12
Camera Back F13
Camera Back Hinge F14
IC Circuit Board F15
Part Number Reference Table F16

総展開図
Drawing of Complete Camera Section

FAA17001-R. 3115 A



上カバー部 Top cover

FAA17001−R. 3115. A

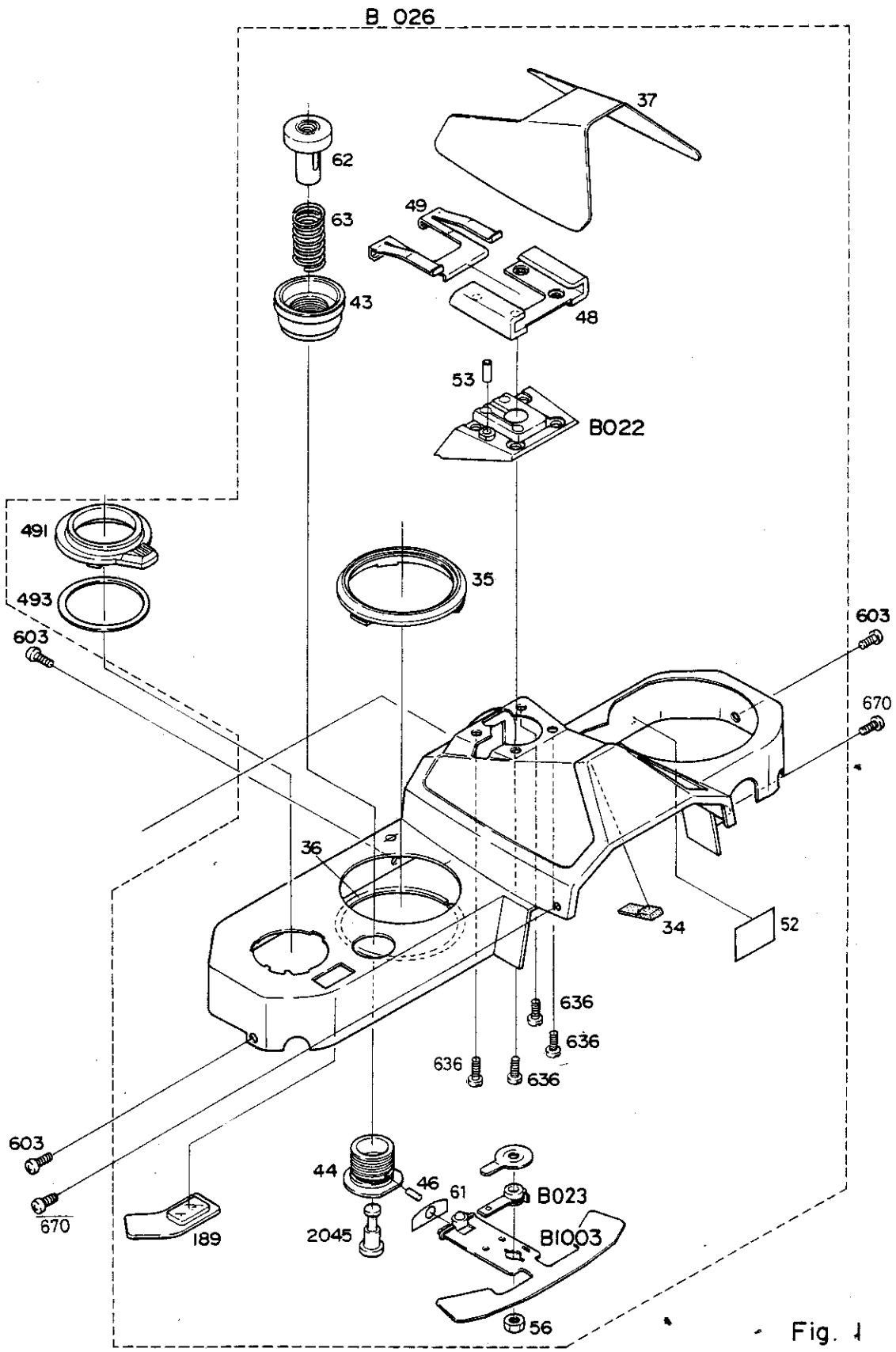


Fig. 1

上地板　Film-advance lever unit

FAA17001−R. 3115. A

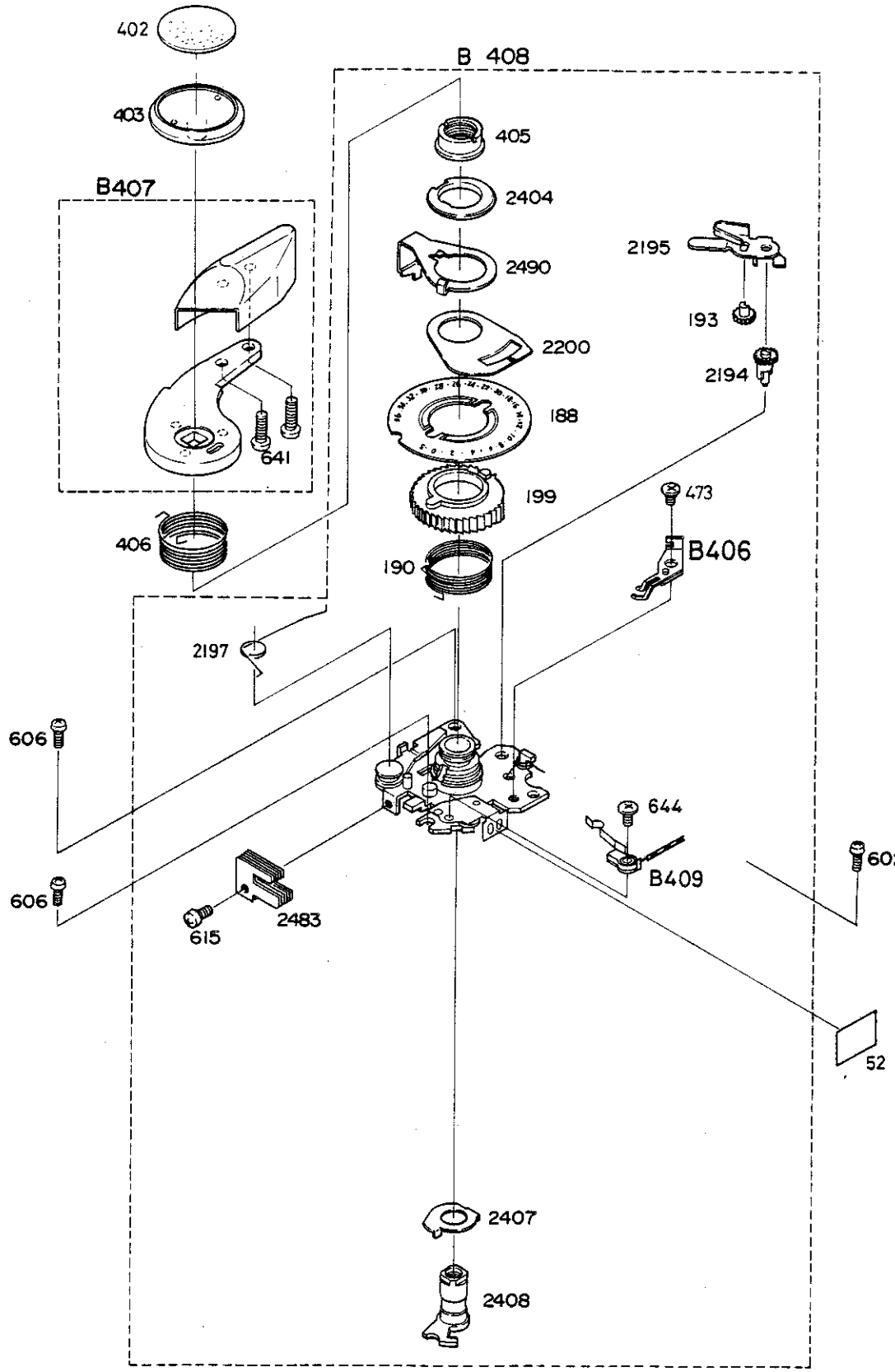


Fig. 2

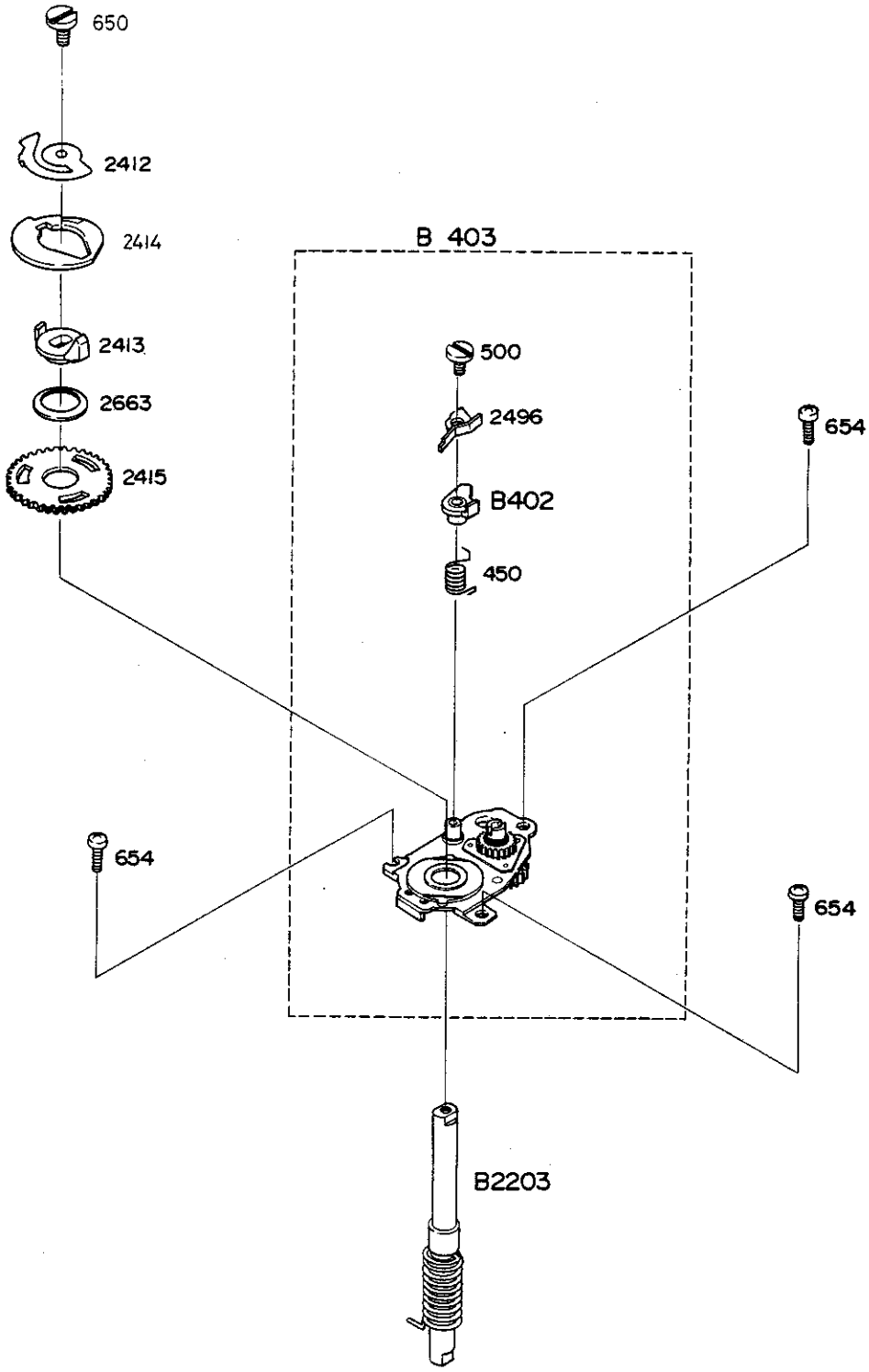

650
2412
2414
2413
2663
2415
B 403
500
2496
B402
450
654
654
654
B2203

Fig. 3

Film-advance shaft • Sprocket

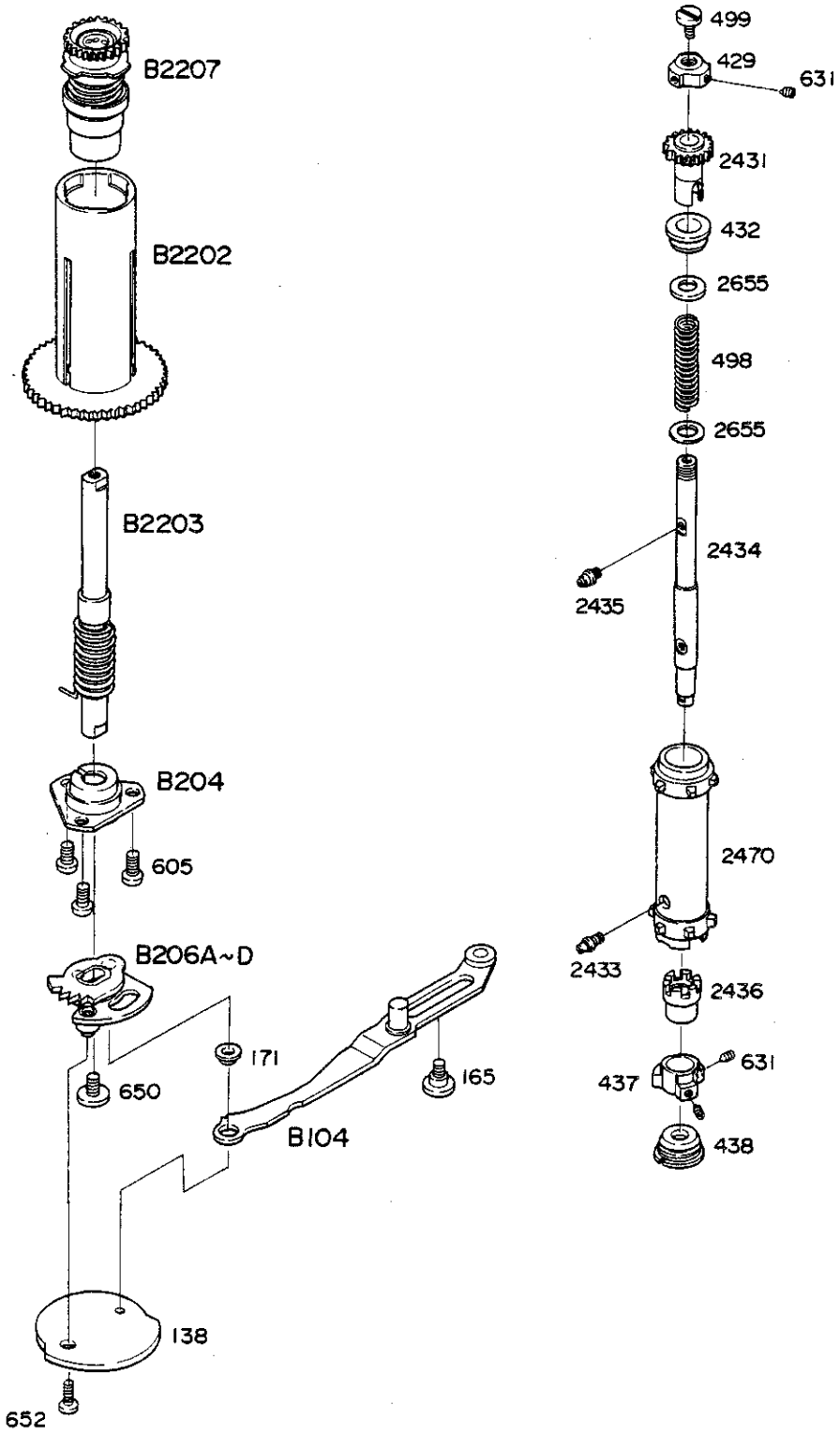


Fig. 4

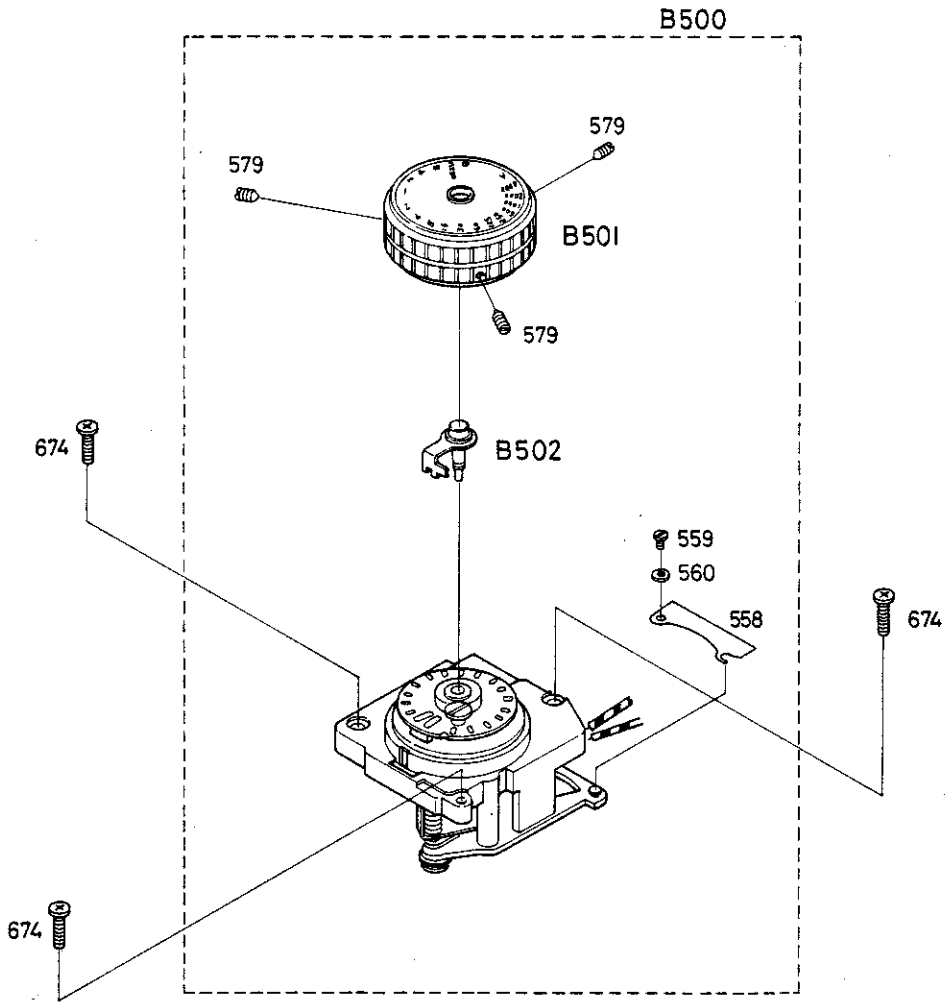


Fig. 5

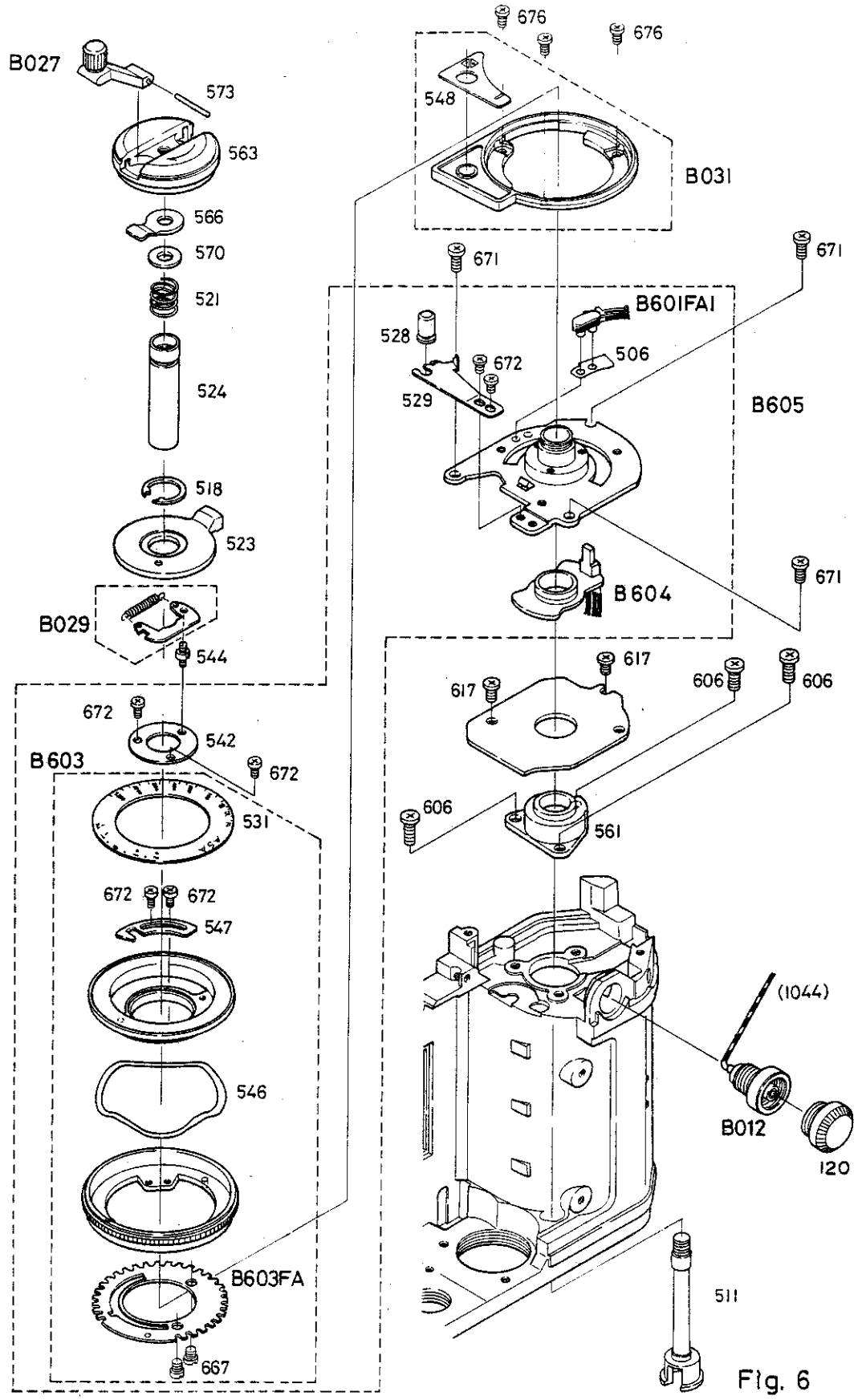

B027
573
563
566
570
521
524
518
523
B029
544
672
542
B603
672
531
672
672
547
546
B603FA
667
676
676
548
B031
671
671
B601FA1
528
672
529
506
B605
671
B604
617
617
606
606
606
561
(1044)
B012
120
511

Fig. 6

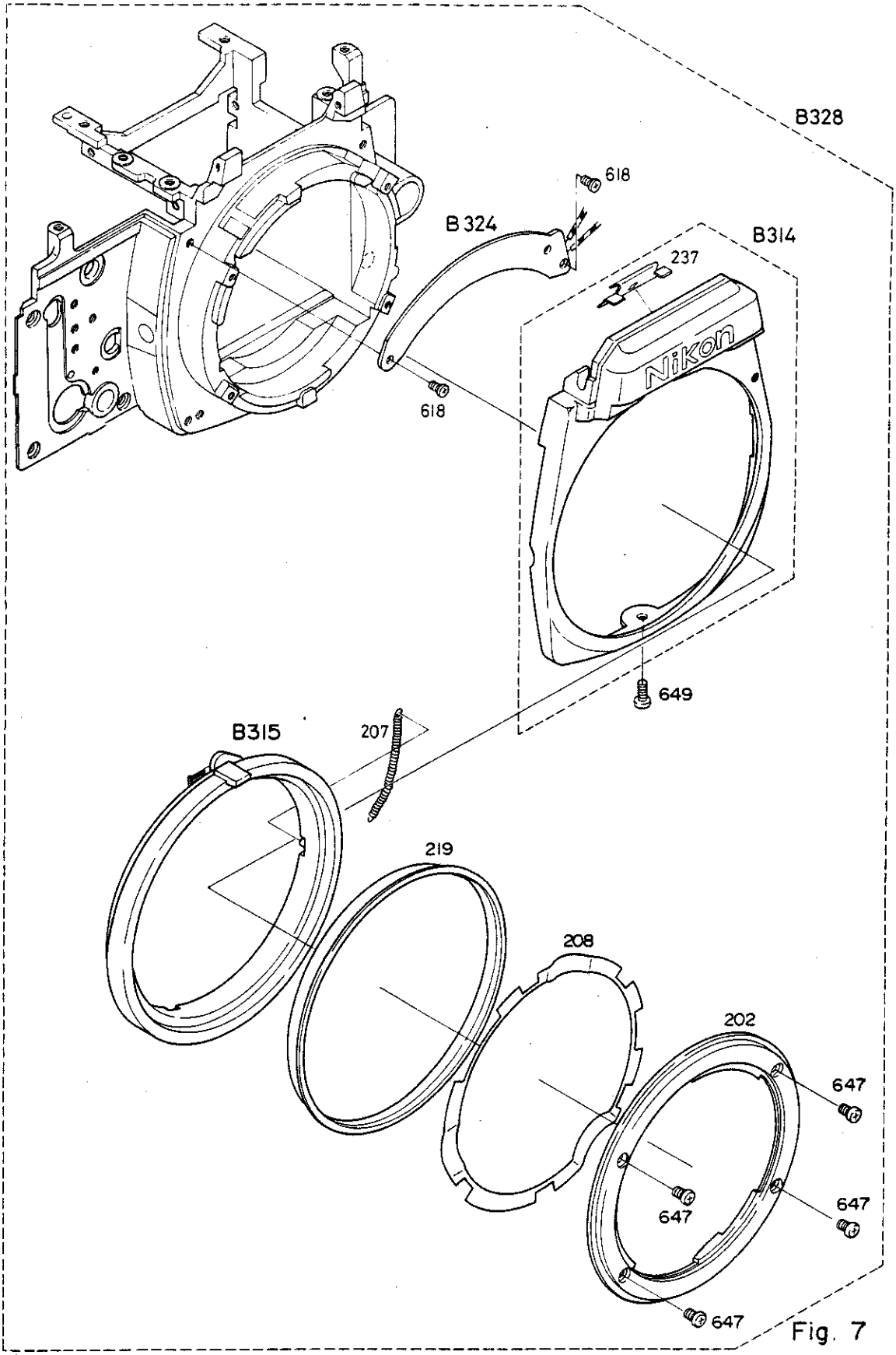

B328
618
B 324
B314
237
618
Nikon
649
B315
207
219
208
202
647
647
647
647

Fig. 7

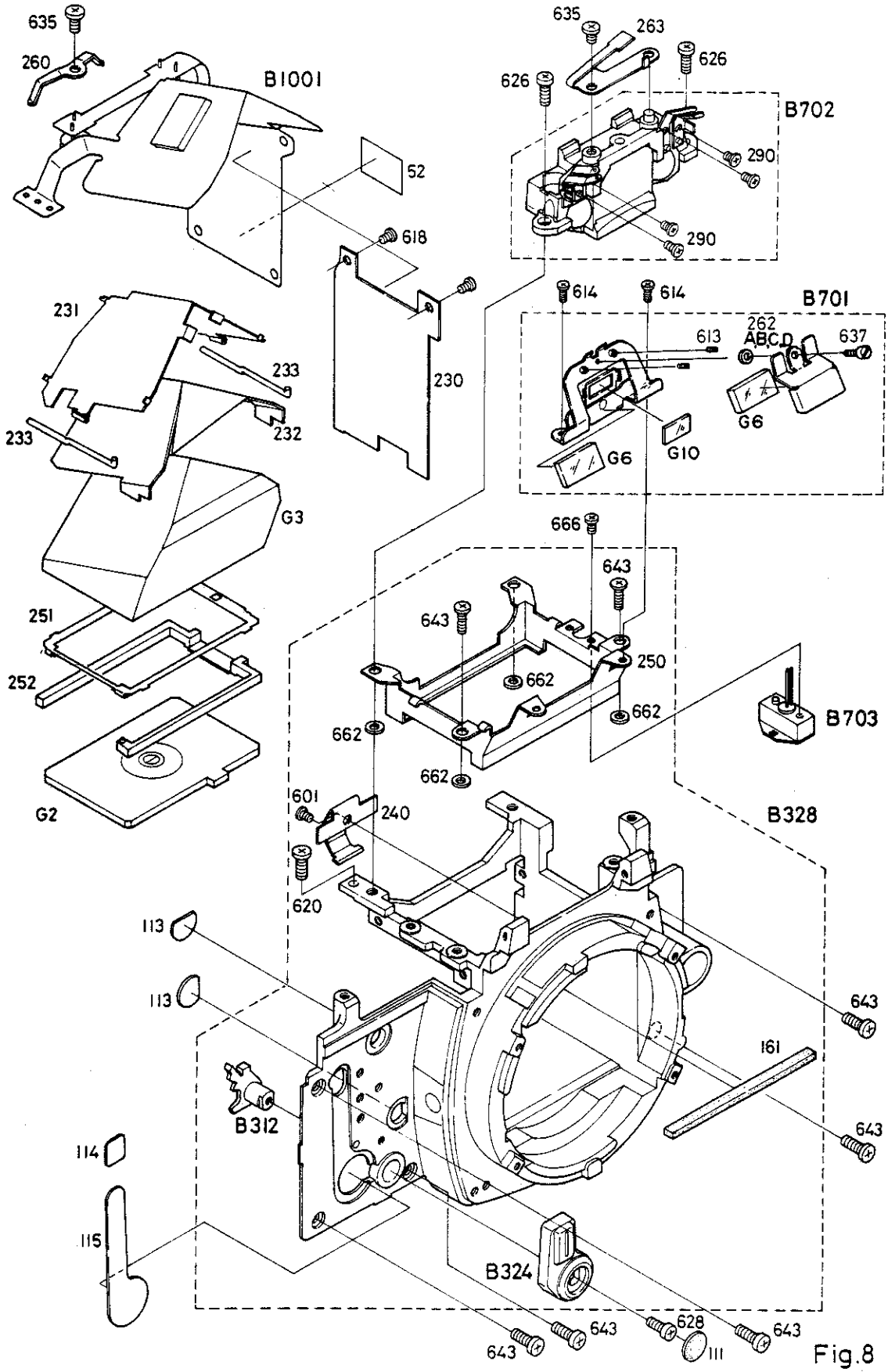

635
260
B1001
52
618
230
231
233
232
G3
251
252
G2
635
263
626
626
B702
290
290
614
614
B701
613
262
ABCD
637
G6
G10
G6
666
643
643
250
662
662
662
662
B703
601
240
620
B328
113
113
643
161
643
B312
114
115
B324
643
643
628
111
643

Fig.8

(2) SHUTTER CONTROL UNIT, ASA DIAL CIRCUIT UNIT AND FRONT PLATE

(3) LEATHERETTE

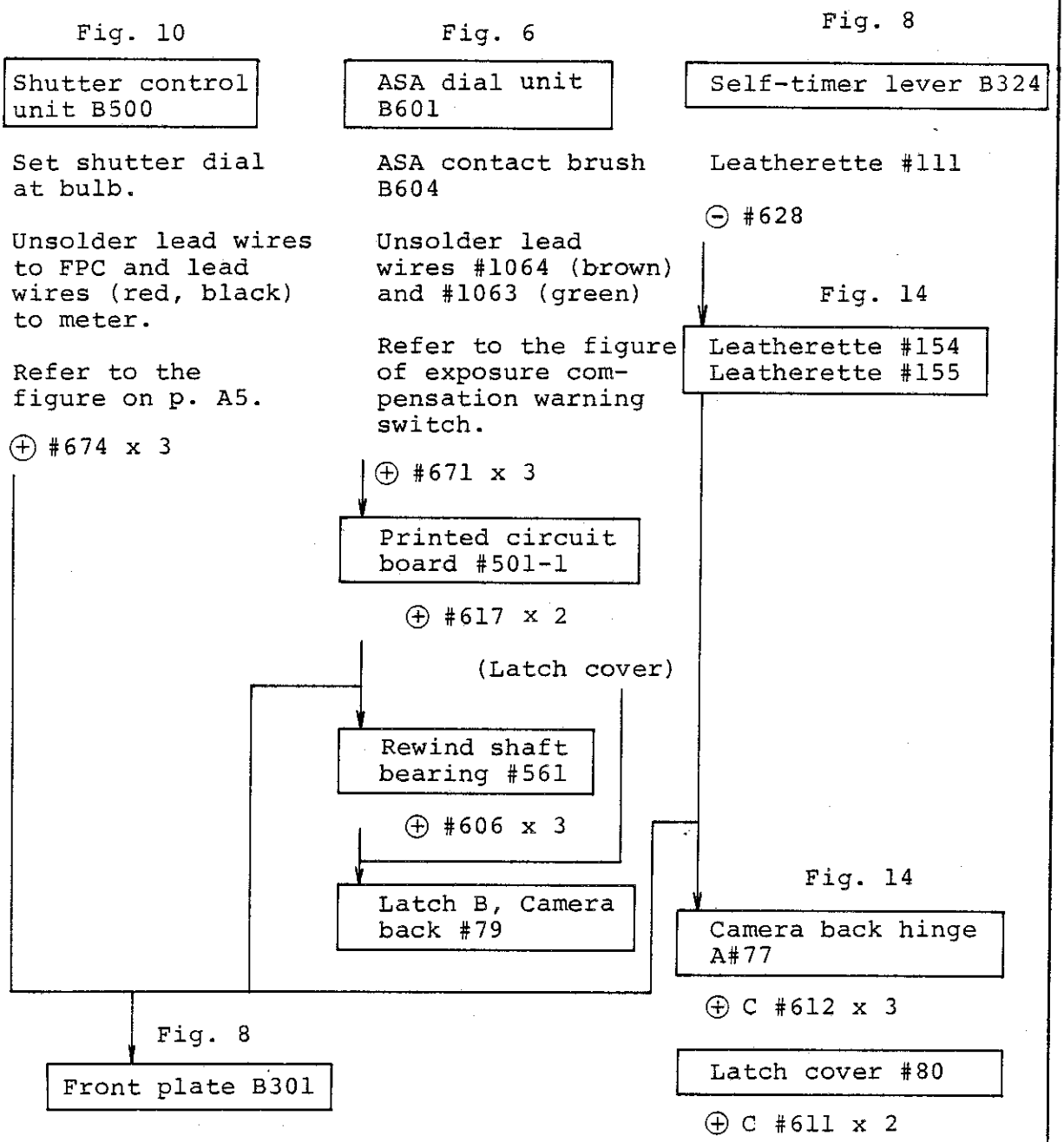


Fig. 10
Shutter control unit B500
Set shutter dial at bulb.
Unsolder lead wires to FPC and lead wires (red, black) to meter.
Refer to the figure on p. A5.
⊕ #674 x 3
Fig. 6
ASA dial unit B601
ASA contact brush B604
Unsolder lead wires #1064 (brown) and #1063 (green)
Refer to the figure of exposure compensation warning switch.
⊕ #671 x 3
Printed circuit board #501-1
⊕ #617 x 2
(Latch cover)
Rewind shaft bearing #561
⊕ #606 x 3
Latch B, Camera back #79
Fig. 8
Front plate B301
Fig. 8
Self-timer lever B324
Leatherette #111
⊖ #628
Fig. 14
Leatherette #154
Leatherette #155
Fig. 14
Camera back hinge A#77
⊕ C #612 x 3
Latch cover #80
⊕ C #611 x 2

Unsolder lead wires to ASA circuit, shutter control circuit, sync contact and FPC.

Refer to the figure on p. A5.
⊕ #643 x 5
⊕ #620

Printed circuit board #501-1 should not be replaced separately since its ASA∫ adjustment has been made to fit for the individual FPC.

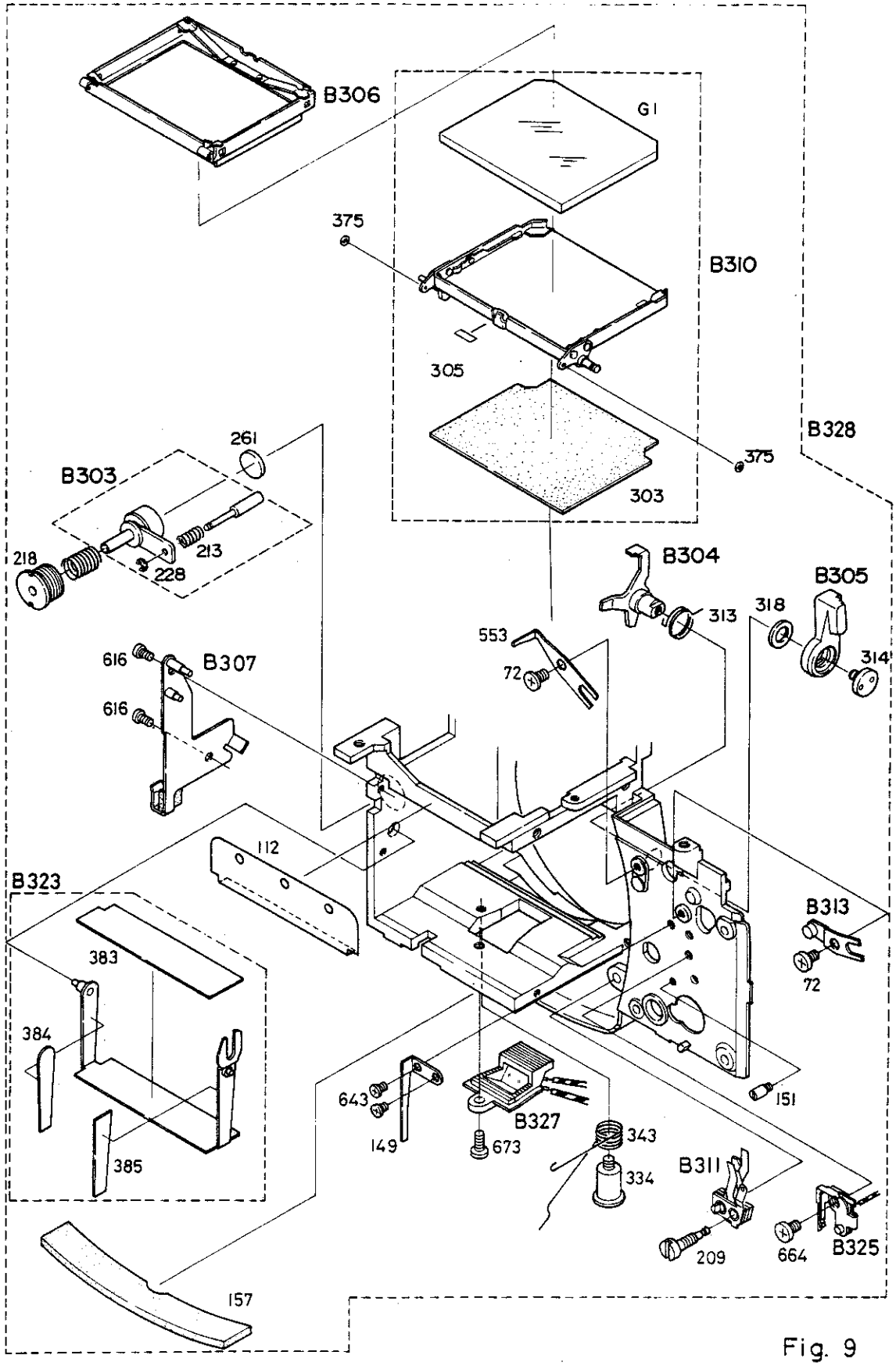

B306
G1
375
B310
305
303
B328
261
B303
218
213
228
B304
313
B305
318
314
553
72
616
B307
616
112
B323
383
384
385
643
149
B327
673
343
334
B311
209
664
B325
151
B313
72
157

Fig. 9

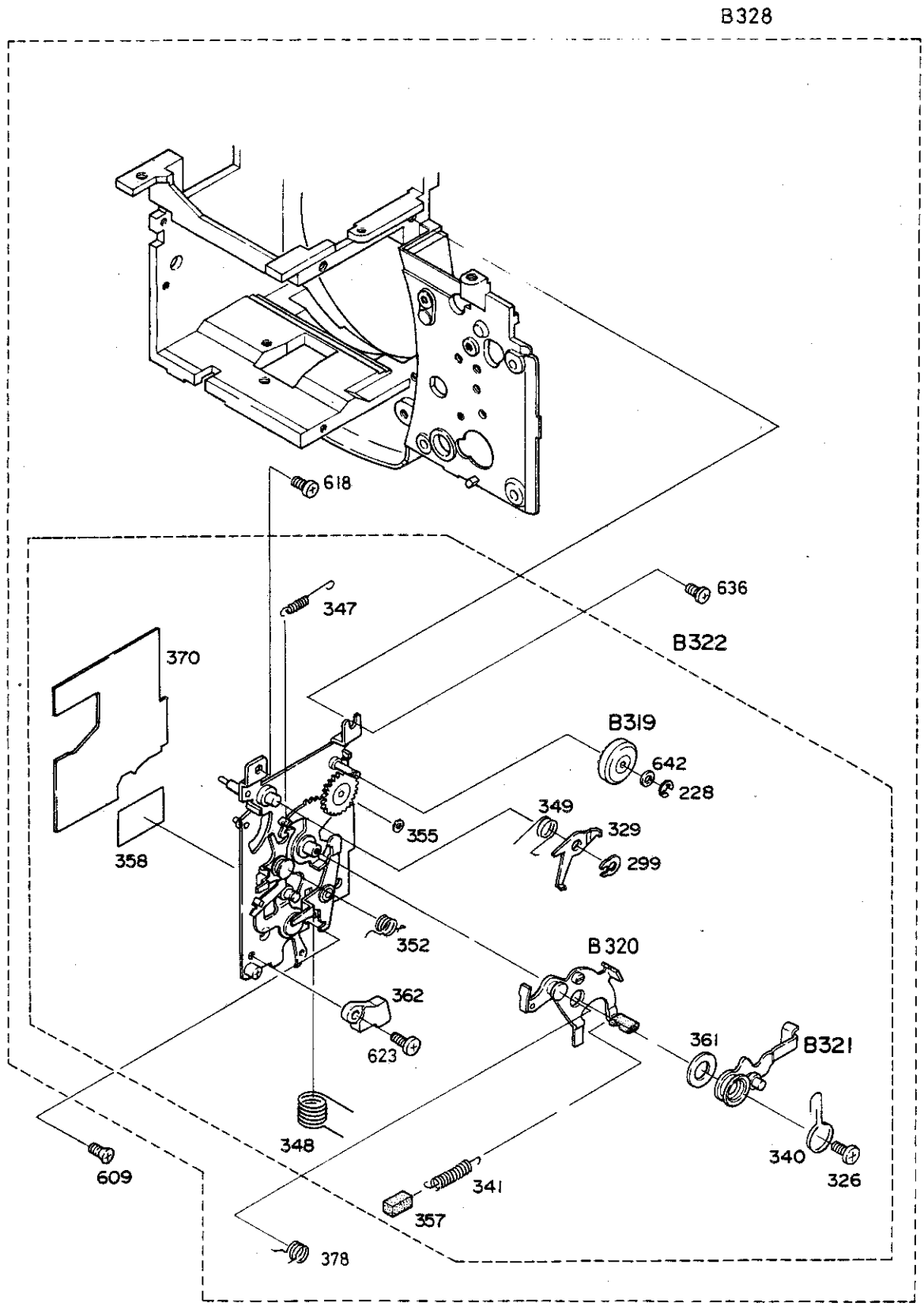

B328
618
636
347
B322
370
B319
642
228
349
329
355
299
358
352
B320
362
623
361
B321
348
340
326
609
341
357
378

Fig. 10

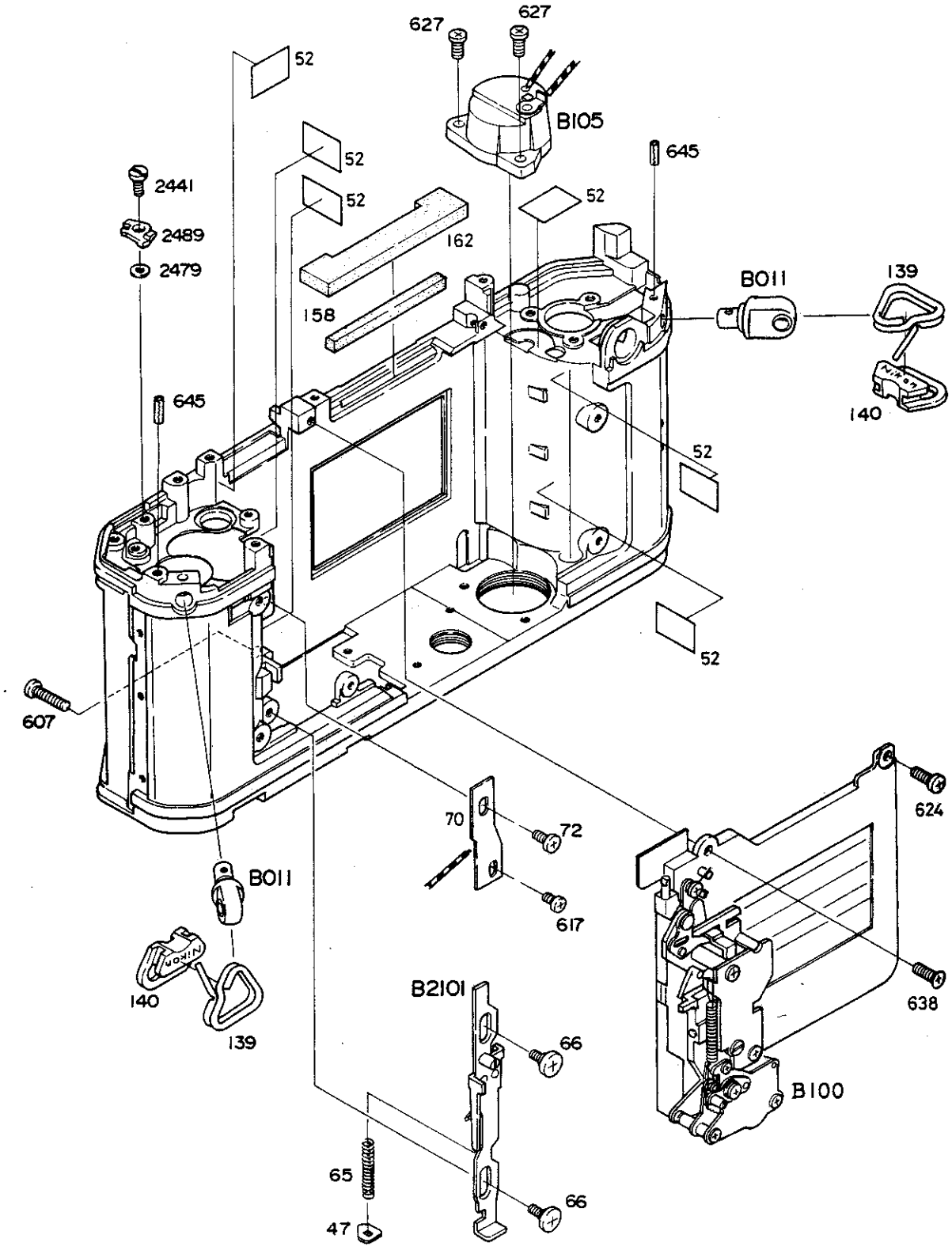

627
627
52
B105
645
2441
52
52
2489
162
52
2479
B011
139
158
645
140
52
52
607
70
72
624
B011
617
140
NIKON
638
B2101
139
66
B100
65
66
47

Fig. 11

ボディ底部 Bottom cover

FAA17001-R. 3115. A

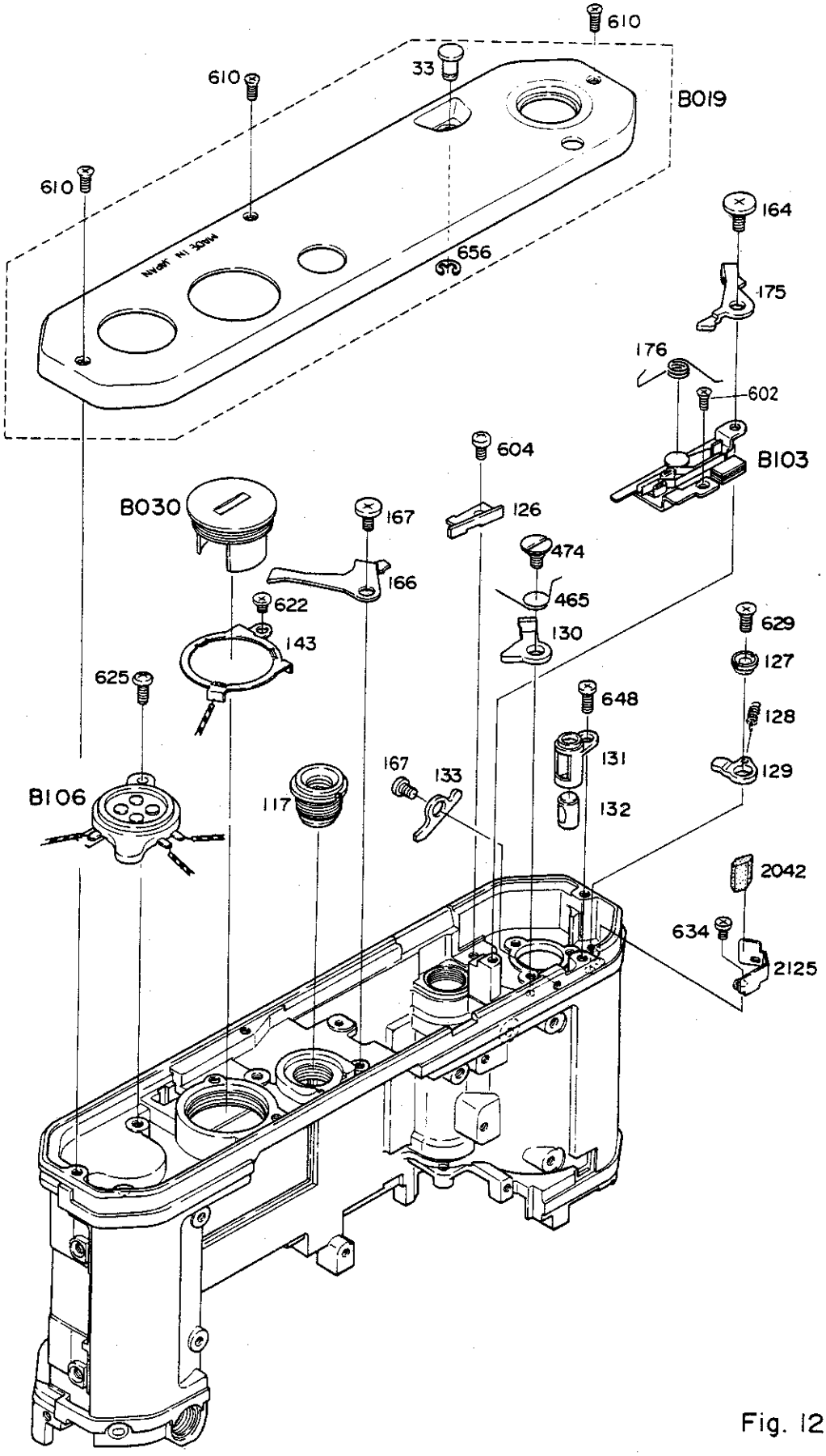


Fig. 12

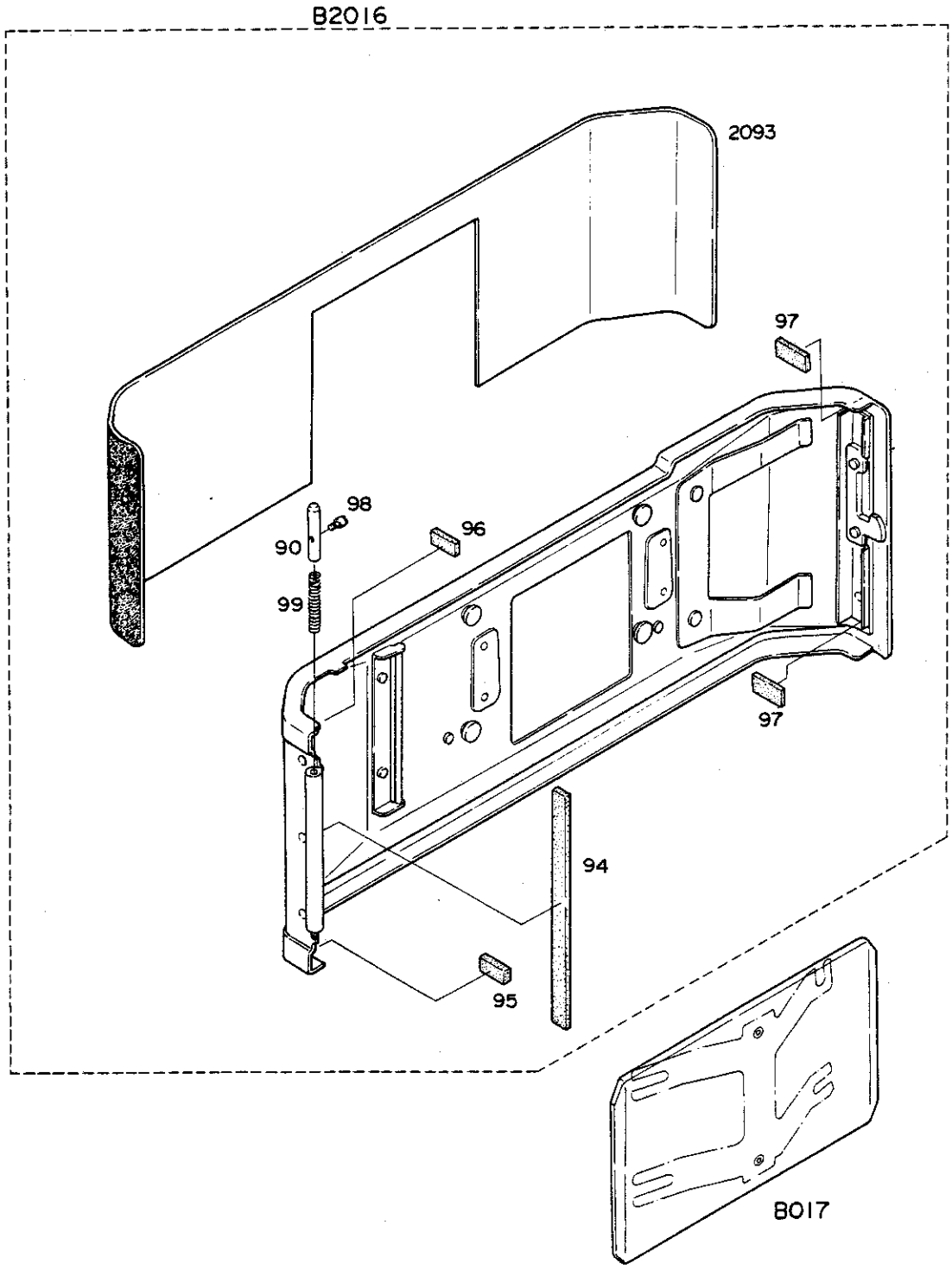
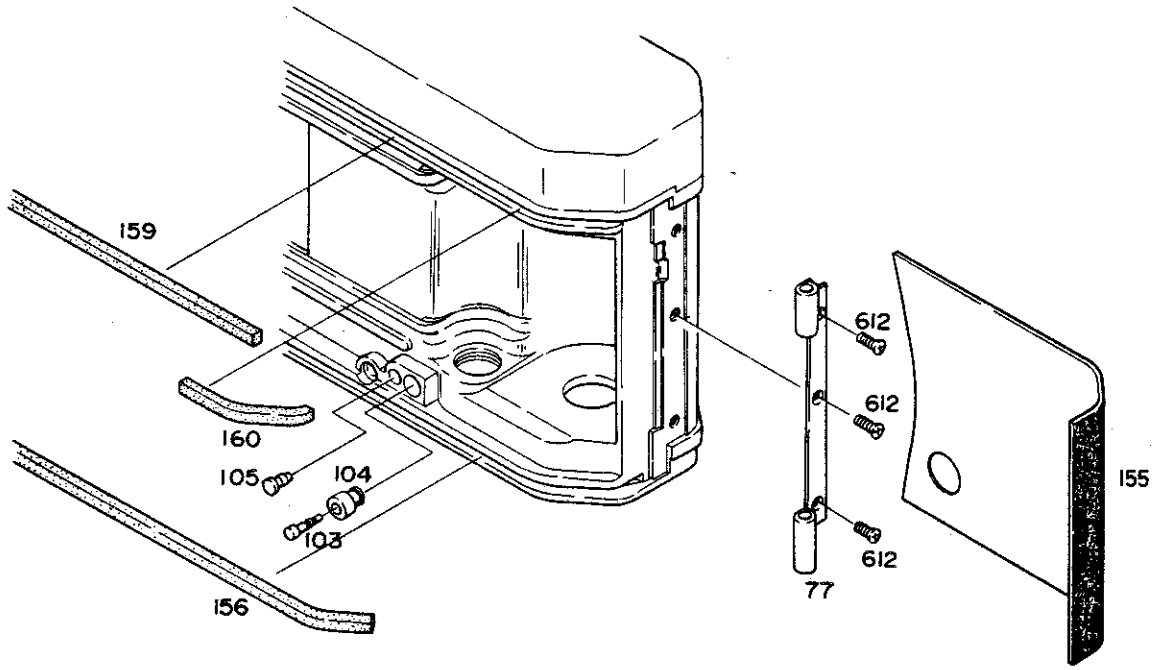


Fig. 13


159
160
105
104
103
156
612
612
612
77
155

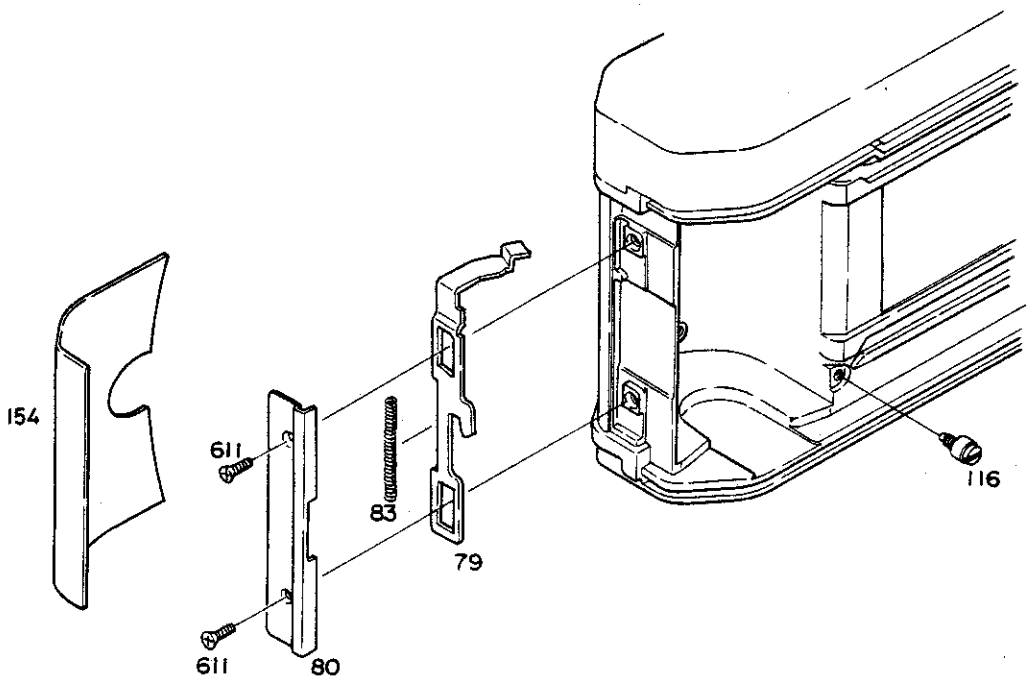

154
611
611
80
83
79
116

Fig. 14

IS007 - 030
B1001

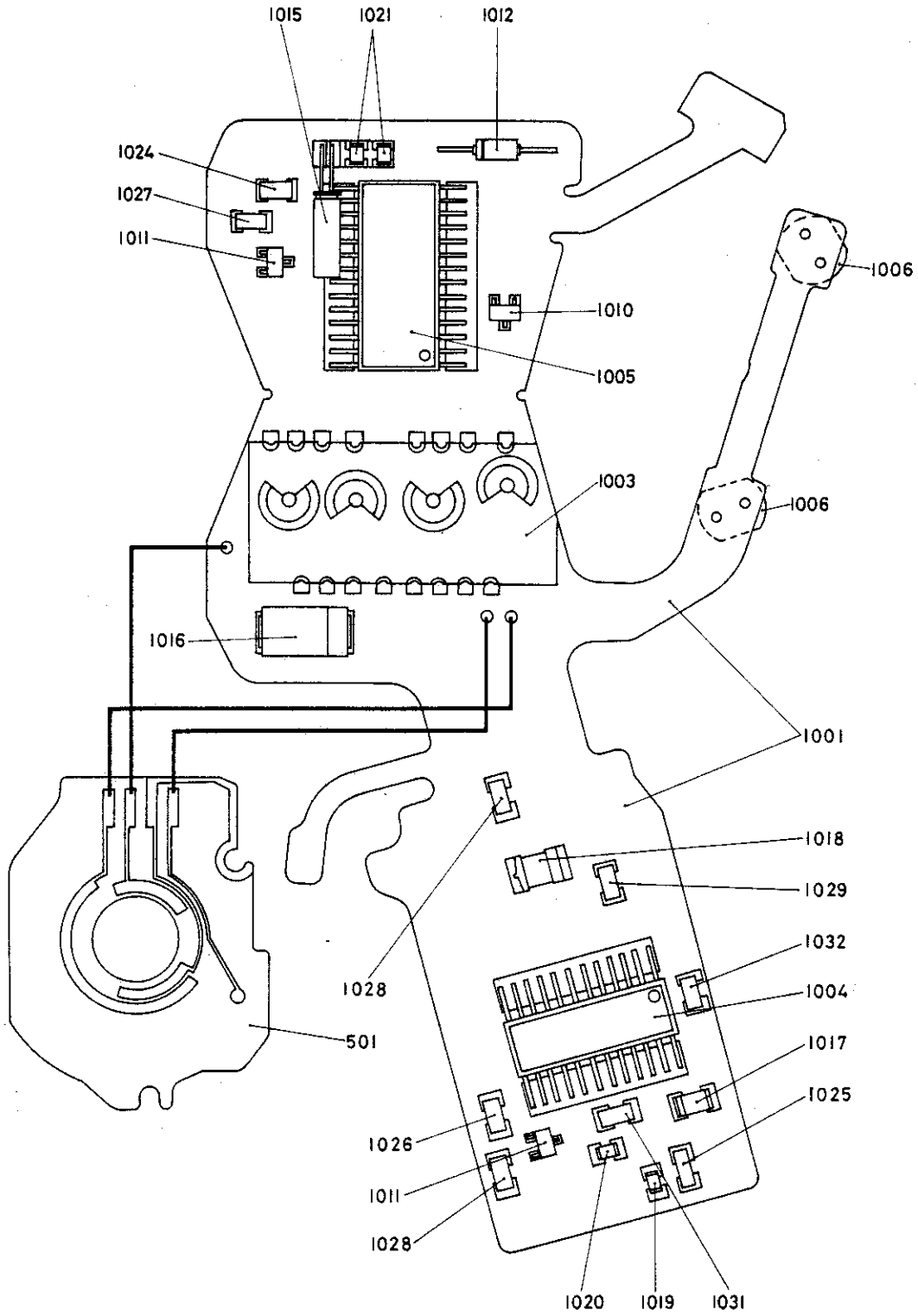


Fig. 15

部品対照表 Parts Number Reference Table

補助番号 Auxiliary Number	部品番号 Part Number	補助番号 Auxiliary Number	部品番号 Part Number	補助番号 Auxiliary Number	部品番号 Part Number
G1	1G551-004-1	54	1K370-482	103	1K370-194
G2	1G950-004	55	1K380-014	104	1K630-081-1
G3	1G415-002	56	1K030-001	105	1K370-358-1
G4	1G104-017	57	1K370-191-1		
G5	1G247-016			108	1K370-195
G6	1G550-008-1	61	1K115-293	109	1K314-141
G7	1G710-003	62	1K400-077-1		
G8	1G308-001	63	1K220-036-1	111	1K115-183-1
G9	1G200-002			112	1K610-170
G10	1G125-001	65	1K220-037-1	113	1K600-225
		66	1K130-052	114	1K600-090-1
				115	1K600-091
22	1K080-017	70	1S711-009	116	1K146-016
23	1K620-065			117	1K400-078
		72	1K130-053		
26	1K670-024-2			120	1K467-016
		77	1K610-168		
33	1K370-189			126	1K610-172-1
34	1K115-180	79	1K314-050	127	1K650-003-1
35	1K640-363	80	1K610-169-1	128	1K225-042-1
				129	1K314-051-3
37	1K115-477	83	1K220-038-1	130	1K314-052-1
38	1K400-079-1			131	1K340-018
		90	1K362-007-1	132	1K370-196
43	1K630-080			133	1K600-092-1
44	1K640-190-1	94	1K115-154		
		95	1K115-155	138	1K680-102-3
46	1K040-001-1	96	1K115-156	139	1K100-035
47	1K600-130	97	1K115-157	140	1K080-005
48	1K406-014	98	1K123-034		
49	1K240-118-2	99	1K220-031	143	1K610-173
49	1K240-215				
50	1K240-046-1			145	1K680-103-1
				146	1K240-050-1
52	1K115-233			147	1K370-197-1
53	1K360-007			148	1K610-174

部品対照表 Parts Number Reference Table

補助番号 Auxiliary Number	部品番号 Part Number
149	1K610-408
150	1K370-521
151	1K126-017
153	1K240-202
154	1K115-478
155	1K115-479
156	1K115-186
157	1K115-187
158	1K115-188
159	1K115-189
160	1K115-190
161	1K115-191-1
162	1K115-192-1
164	1K130-055
165	1K130-056-1
166	1K314-053-1
167	1K130-057-1
168	1K340-019-1
171	1K340-020
175	1K314-056
183	1K240-203
184	1K680-246
188	1K475-158-1
189	1K625-007-2
190	1K230-114
191	1K370-519-1
192	1K340-026
193	1K260-078
198	1K050-058

補助番号 Auxiliary Number	部品番号 Part Number
199	1K275-026
202	1K404-030-1
206	1K240-090-1
207	1K225-075-1
208	1K240-065-1
209	1K130-170-1
210	1S322-017
213	1K220-041
216	1K220-042
218	1K630-090
219	1K640-298
220	1K640-293
226	1K580-006-1
227	1K083-030-1
228	1K060-003
229	1K115-592
230	1K610-406
231	1K240-204-2
232	1K115-488-1
233	1K233-016-2
235	1K610-407
236	1K240-190
237	1K240-191
238	1K240-192
239	1K048-034
240	1K240-156
243	1K370-244-1
244	1K240-068

補助番号 Auxiliary Number	部品番号 Part Number
245	1K620-032-1
248	1K370-247-1
250	1K620-066
251	1K576-040-1
252	1K680-240-1
254	1K610-205
255	1K610-206
257	1K576-027
259	1K680-113-2
260	1K240-074
261	1K115-203
263	1K240-201-1
262	1K050-123
262	1K050-124
262	1K050-125
262	1K050-126
286	1K240-194
287	1K240-195
288	1K240-069
289	1K240-070
290	1K010-018
299	1K060-004
301	1K610-177
302	1K370-203-1
303	1K115-220-3
304	1K600-094-1
305	1K115-391-1

部品対照表 Parts Number Reference Table

補助番号 Auxiliary Number	部品番号 Part Number
306	1K370-204
307	1K370-499
310	1K314-057-1
311	1K156-024
313	1K230-028
314	1K120-051
318	1K050-019
326	1K120-052
329	1K314-064-1
332	1K610-409
334	1K130-058-1
340	1K230-030-2
341	1K225-043-2
343	1K230-031-2
345	1K240-054
346	1K240-055
347	1K225-044-2
348	1K230-032
349	1K230-033-1
352	1K230-034
355	1K050-050
357	1K115-196
358	1K600-096-1
361	1K050-020
361	1K050-132
361	1K050-134

補助番号 Auxiliary Number	部品番号 Part Number
362	1K680-106
364	1K240-056-1
365	1K240-057-2
366	1K240-211
367	1K240-212
368	1K136-015
369	1K115-507
370	1K115-480
371	1K680-255-1
372	1K600-236-1
373	1K370-217
375	1K050-022
375	1K050-112
375	1K050-144
377	1K680-241
378	1K230-035-1
379	1K115-481
382	1K610-379
383	1K115-460
384	1K115-461
385	1K115-462
386	1K370-483
388	1K370-485
391	1K366-013-1
402	1K115-198
403	1K146-017-1
405	1K150-008
406	1K230-039

補助番号 Auxiliary Number	部品番号 Part Number
411	1K260-118
417	1K260-117
418	1K314-080
419	1K370-601
423	1K640-355
429	1K300-034
437	1K630-085
438	1K640-199
440	1K370-224
443	1K310-019
444	1K314-069
447	1K610-187
448	1K370-225
449	1K340-023
450	1K230-041
451	1K610-413-3
452	1K625-027-1
457	1K640-356
465	1K230-043
472	1K610-437
473	1K130-152-1
474	1K130-063
475	1K680-256
476	1K230-108
478	1K370-469-1

(2-1) FRONT PLATE

Lead wires to be unsoldered.

Printed circuit board (ASA)

① #1047 (white) → DB Contact

Printed circuit board (Shutter)

② #1056 (green)
③ #1045 (red)
④ #1055 (black)
⑤ #1054 (yellow)
— FPC

Lead wires 2 - 5 can be unsoldered also from the terminals of FPC.

Sync contact

⑥ #1043 (blue)
#1044 (blue)

FPC

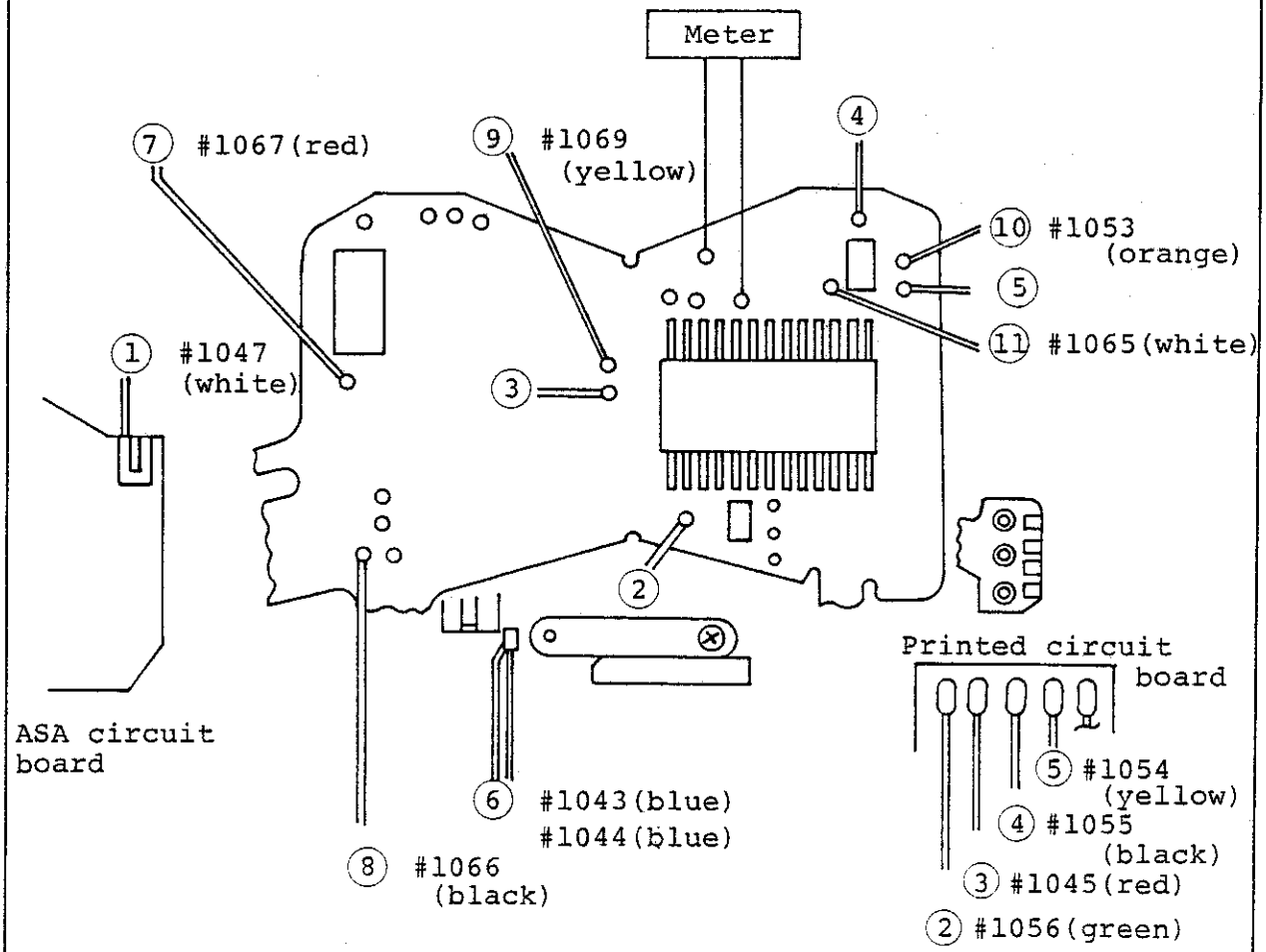
⑦ #1067 (red) → Battery chamber ⊕ contact

⑧ #1066 (black) → Battery chamber ⊖ contact

⑨ #1069 (yellow) → Battery chamber IS contact

⑩ #1053 (orange) → Meter

⑪ #1065 (white) → FC switch



部品対照表 Parts Number Reference Table

補助番号 Auxiliary Number	部品番号 Part Number
481	1K240-213
485	1K370-520-1
487	1K240-238-1
488	1S705-028
491	1K206-002
492	1K680-267
493	1K160-180
493	1K160-181
493	1K160-182
497	1K078-007
498	1K220-039
499	1K120-053
500	1K120-054
501	1S322-018
502	1K240-209
503	1K240-210
504	1K680-253-1
505	1K115-494-1
506	1K115-495
507	1S705-021-1
511	1K370-486
518	1K060-020
521	1K220-096
523	1K640-364
524	1K630-157
526	1K610-411
527	1K485-050
528	1K370-487

補助番号 Auxiliary Number	部品番号 Part Number
529	1K240-196-1
530	1K340-054
531	1K470-015
532	1K240-197
533	1K340-055-1
534	1K340-056
535	1K240-198
536	1K240-199
542	1K160-253
543	1K310-038
544	1K130-141
545	1K680-254
546	1K246-016
547	1K600-226
548	1K087-055
549	1K370-479
553	1K314-142
554	1K314-143
556	1K370-489
558	1K470-028
559	1K120-139
560	1K050-146
561	1K680-242
563	1K201-013
565	1K225-045
566	1K240-064-1
570	1K050-023
573	P1-10080SX
574	1K640-321
575	1K470-023

補助番号 Auxiliary Number	部品番号 Part Number
576	1K640-322
577	1K208-031
578	1K610-438
579	1K008-007
580	1K314-144
581	1K314-145
582	1K314-146
583	1K314-147
584	1K570-030
585	1K570-031
586	1K570-032
587	1K570-033
588	1K570-034
589	1K570-035
590	1K570-036
591	1K570-037
601	A1-17015FB
602	A1-17030FA
603	A1-17030FC
603B	1K001-005
604	A1-20025FB
605	A1-20022FB
606	A1-20030FB
607	A1-20070FT
609	A2-17025FB
610	A2-17025FC
610B	1K001-006-1
611	A2-17030FB
612	1K001-004
613	K2-14025FB
614	B1-14020FB
615	1K123-051
616	B1-17022FB
617	B1-17025FA

部品対照表 Parts Number Reference Table

補助番号 Auxiliary Number	部品番号 Part Number
618	B1-17025FB
620	B1-17040FA
622	B1-20025FA
623	1K120-029-1
624	A1-2003GBX
625	B1-20040FB
626	B1-20050FA
627	B1-20045FB
628	1K123-038
629	B2-20045FA
630	A1-20028FB
631	K2-14015FA
634	A1-17018FB
635	H1-20028FB
636	B1-17030FA
637	A1-14020FD
638	A2-20035FB
641	1K010-019
642	1K050-024
643	1K123-042
644	1K120-122
645	1K044-003
647	1K123-039
648	1K123-040
649	1K120-092
650	1K120-060-1
652	1K120-061
654	1K120-063
656	1K060-005-1

補助番号 Auxiliary Number	部品番号 Part Number
662A	1K050-029
662B	1K050-030
662C	1K050-031
662D	1K050-032
662E	1K050-033
662F	1K050-034
662G	1K050-035
662H	1K050-036
662I	1K050-037
662J	1K050-038
662K	1K050-039
662M	1K050-040
662N	1K050-041
662P	1K050-042
662Q	1K050-043
662R	1K050-044
662S	1K050-045
662T	1K050-046
662U	1K050-047
662V	1K050-048
664	1K146-035
666	E1-14025FB
667	1K123-059
670	A1-17055FC
670B	1K001-016
671	1K120-003
672	1K120-028
673	B1-17030FB
674	1K120-114
676	1K120-015

補助番号 Auxiliary Number	部品番号 Part Number
1001	1S705-022-1
1002	1S705-023-1
1003	1S322-019
1004	1S237-038
1005	1S210-006
1006	1S250-003
1007	1S250-007
1008	1S260-005
1009	1S260-010
1010	1A130-009
1011	1S130-008
1012	1S118-001
1015	1S382-003
1016	1S340-030-1
1017	1S340-031
1018	1S340-025
1019	1S335-009
1020	1S335-028
1021	1S335-008
1024	1S310-009
1025	1S310-024
1026	1S310-031
1027	1S310-034
1028	1S310-022
1029	1S310-015
1031	1S310-020
1032	1S310-012
1036	1S810-261
1037	1S810-262
1038	1S810-263
1039	1S810-060
1040	1S810-059

部品対照表 Parts Number Reference Table

補助番号 Auxiliary Number	部品番号 Part Number
1041	1S810-266
1042	1S810-267
1043	1S810-268-1
1044	1S810-269-1
1045	1S810-270
1047	1S810-272
1048	1S810-273
1049	1S810-274
1050	1S810-275
1051	1S810-276-1
1052	1S810-277-1
1053	1S810-278-1
1054	1S810-279
1055	1S810-280
1056	1S810-281
1057	1S810-282
1058	1S810-283
1059	1S810-284
1060	1S810-285
1061	1S810-286-1
1062	1S810-287
1063	1S810-288
1064	1S810-289
1065	1S810-290
1066	1S810-291
1067	1S810-292
1068	1S810-299
1069	1S810-298

補助番号 Auxiliary Number	部品番号 Part Number
2042	1K110-082
2045	1K370-363-1
2093	1K115-301-1
2125	1K610-266-1
2194	1K260-050-1
2195	1K610-267-2
2196	1K314-105
2197	1K230-077
2200	1K480-005
2404	1K640-253
2407	1K610-270
2408	1K680-169-2
2409	1K340-040-1
2412	1K610-271-1
2413	1K680-170-1
2414	1K610-272-2
2415	1K260-052
2416	1K260-053
2427	1K050-072
2431	1K260-056
2433	1K130-096
2434	1K370-367
2435	1K130-097
2436	1K630-114
2441	1K130-098
2445	1K610-273-1
2453	1K370-368-2
2470	1K275-010
2479	1K050-073
2482	1K370-371
2483	1K610-275
2484	1K314-106-1

補助番号 Auxiliary Number	部品番号 Part Number
2489	1K680-172-1
2490	1K610-277-1
2496	1K610-278
2655	1K050-074
2663A	1K050-075
2663B	1K050-076
2663C	1K050-077
2663D	1K050-078
2663E	1K050-079
2663F	1K050-080

部品対照表 Parts Number Reference Table

補助番号 Auxiliary Number	部品番号 Part Number
B019	1B620-008-3
B022	1B680-012-1
B023	1B240-003
B026	1B670-016-4
B029	1B310-030
B030	1B467-007-2
B031	1B485-010
B100	1B001-262
B103	1B001-091-3
B104	1B314-051-2
B105	1B060-122-1
B106	1B001-092
B204	1B340-001-2
B206A	1B300-007-6
B206B	1B300-008-7
B206C	1B300-009-7
B206D	1B300-010-8
B303	1B001-098-2
B304	1B314-080
B305	1B206-002-1
B306	1B001-099-2
B307	1B001-263-1
B310	1B100-138-1
B311	1B060-088-2
B312	1B314-081
B313	1B314-082
B314	1B100-189
B314	1B100-148
B315	1B640-018
B319	1B260-002-1
B320	1B314-053-2
B321	1B314-054-3
B322	1B060-089-3
B323	1B001-265
B324	1B206-003-1
B325	1B060-090
B326	1B060-091-1

補助番号 Auxiliary Number	部品番号 Part Number
B327	1B060-092
B328	1B670-020-8
B403	1B001-313-1
B406	1B001-270-1
B407	1B206-004-1
B408	1B060-096-6
B409	1B060-095
B500	1B001-271
B501	1B201-013
B502	1B208-008
B601FA1	1B001-267FA1
B603	1B060-097-1
B603	1B060-099-1
B603FA1	1B060-097FA1
B604	1B001-268
B605	1B060-098-4
B605	1B060-100
B701	1B100-140
B702	1B100-139-2
B703	1B060-093-1
B1001	1S007-030-4
B1003	1S007-032-1
B2101	1B314-056-7
B2202	1B630-009
B2207	1B001-128-3

PAFTS LIST

Contents

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[1] PARTS LIST P1

[2] ASSEMBLY LIST P46

Marks in the Parts List

部品表の部品番号及び部組品一覧表の部組品番号欄にある(　　)内の図番は，部品課から出庫されるＲＰの包装ラベルに表示されている図番(在庫管理部品)で，各々共通部品です。

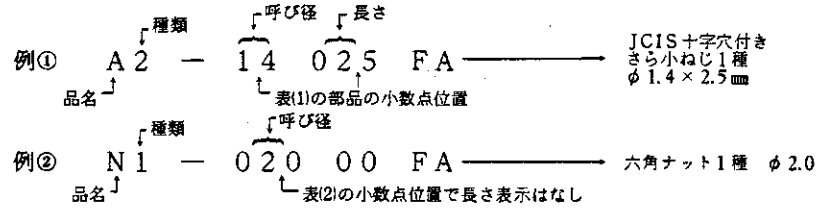
＊ COMMON PART AND RP CODE

A code in parenthesis under part number is for common part. This RP code is to be printed on package label.

記号説明　MARKS IN THE PARTS LIST

(1) 機 械 標 準 品

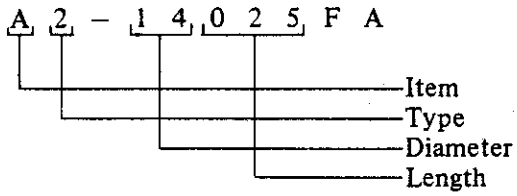
下の表に示す機械標準品の部品番号は品名、種類、呼び径、長さを示しています。



(1) Standard mechanical parts

Reference Number in the Parts List

A. Screw · pin



B. Nut · Washer · Snap ring

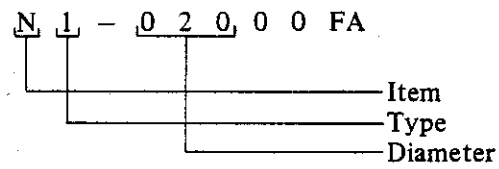


表 1

品名 Item		種類 Type	
JCIS 十字穴付き小ねじ 1種 Cross-point screw 1	A	な べ Pan	1
		さ ら Countersunk	2
		丸さら Oval	3
JCIS 十字穴付き小ねじ 3種 〃 screw 3	B	な べ Pan	1
		さ ら Countersunk	2
		丸さら Oval	3
十字穴付き小ねじ Cross-point screw	C	な べ Pan	1
		さ ら Countersunk	2
		丸さら Oval	3
		トラス Truss	4
十字穴付き タッピンねじB型 1種 Cross-point tapped screw B1	D	な べ Pan	1
		さ ら Countersunk	2
		丸さら Oval	3
十字穴付き タッピンねじB型 3種 〃 screw B3	E	な べ Pan	1
		さ ら Countersunk	2
		丸さら Oval	3
十字穴付き タッピンねじ 2種 〃 screw 2	F	な べ Pan	1
		さ ら Countersunk	2
		丸さら Oval	3
十字穴付き タップタイトねじ B型 1種 Cross-point tap-tight screw B1	G	な べ Pan	1
		さ ら Countersunk	2
		丸さら Oval	3
十字穴付き タップタイトねじ B型 3種 Cross-point tap-tight screw B3	H	な べ Pan	1
		さ ら Countersunk	2
		丸さら Oval	3
すりわり付き止ねじ Splitted set screw	K	丸 先 Round point	1
		とがり先 Cone point	2
		くぼみ先 Half point	3

品名 Item		種類 Type	
六角穴付き止ねじ Hexagon socket head set screw	L	丸 先 Round point	1
		とがり先 Cone point	2
		くぼみ先 Half point	3
六角穴付きボルト Hexagon socket head bolt	M		1
平 行 ピ ン Straight pin	P		1
テ ー パ ピ ン Taper pin			2
スプリングピン Spring cotter		一 般 用 Normal	3
		軽荷重用 Light	4

表 2

六 角 ナ ッ ト Hexagon nut	N	1 種 Type 1	1
		3 種 Type 3	3
平 座 金 Washer	R	小 形 丸	1
		みがき丸	2
ばね座金 Spring washer			5
止 め 輪 Snap ring	S	E 型 Type E	1
		G 型 Type G	2
		GS型 Type GS	3
鋼 球 Steel ball	T	(mm)	1
		(インチ) Inch	2
ヘ リ サ ー ト Helicert	U	(mm)	1
		(インチ) Inch	2

(2) The term of sale column 販売区分欄

Mark 記号	Explanation 説明	
○	Can be supplied individually	単独部品として販売するもの
△	Not supplied individually but only as subassembly	部組品でなければ販売しないもの
○△	Supplied either as part or subassembly	単独部品でも部組品でも販売するもの
×	Not considered as repair part	修理部品とは考えないもの
※	Should be sent to the factory if the repair is needed	単体では交換できないので、組む場合に工場での加工が必要なもの
◘	Delivered as a product from the sales department (i.e., not supplied as repair part)	商品として販売店で販売しているもの（修理部品扱いはしない）

(3) The remarks column 備考欄

32FB1＃664	Part number used in common	共通部品番号
(Blue×125mn)	Lead wire (color×length)	コードの色と長さ
53F2013 (FM-780028)	Technical information ref. number (number in parenthesis; English edition)	製品技術資料番号、（ ）内は英文 No.
(2.1×3.8×0.007)	Washer (internal diameter ×external diameter×thickness)	ワッシャーの（内径×外径×厚さ）
(Black)	Black-finished parts	黒部品
(d=0.2)	Diameter of wire.	線径=0.2
(t=1)	Thickness	厚さ=1
Rev.	Revision	訂正
Add.	Addition	追加
Dis.	Discontinuation	廃止
Ⓟ	Plastic part	プラスチック部品
OLD	Part of the initial design	旧部品
R1…, D1… C1…, Q1… W1…, P1…	Abbreviation for electronic part	電気部品記号

＊……既出部品

部品表の部品番号及び部組品一覧表の部組品番号欄にある（ ）内の図番は，部品課から出庫されるＲＰの包装ラベルに表示されている図番(在庫管理部品)で，各々共通部品です。

＊ COMMON PART AND RP CODE

A code in parenthesis under part number is for common part. This RP code is to be printed on package label.

〔1〕部 品 表 Parts list

FAA17001-R. 3115. A

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs.per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K001-004	612	コネジ Screw 1.7-2.3	3		14×3	○	FM2
* 1K001-005	603B	コネジ Screw 1.7-3.0 (黒)	3			○	FM2
* 1K001-006-1 (1K001-006)	6610B	コネジ Screw 1.7-2.5 (黒)	3			○	FM2
* 1K001-016	670B	コネジ Screw 1.7-5.5 (黒)	2			○	
* 1K008-007	579	トメネジ Screw 1.7-2.2	3	1B001-271	5	○△	
* 1K010-018	290	タッピン コネジ Screw 1.4-1.6	4	1B100-139-2	8	○△	FM2
* 1K010-019	641	タップ タイト ネジ Screw 2.0-4.5	2	1B206-004-1	2	○△	FM2
* 1K030-001	56	ナット Nut	1	1B670-016-4 1B670-019-4	1	○△	FM2
* 1K040-001-1 (1K040-001)	46	平行ピン Pin	1	1B670-016-4 1B670-019-4	1	○△	FM2
* 1K044-001-1	119	スプリング ネジ Pin	2	1B001-085		△	FM2
* 1K044-003	645	スプリング ピン Pin	2		11	○	FM2
* 1K048-034	239	リベット Rivet	1	1B100-140		△	35FB 231
* 1K050-019	318	座金 Washer t = 0.2	1	1B670-020-8	9	○△	FM2
* 1K050-020	361	座金 Washer t = 0.03	1	1B060-089-3	10	○△	FM2

部 品 表 Parts list

FAA17001-R. 3115. A

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs.per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K050-022	375	座金 Washer t = 0.2	1	1B670-020-8 1B670-021-8	9	○△	FM2
* 1K050-023	570	座金 Washer t = 0.5	1		6	○	FM2
* 1K050-024	642	座金 Washer t = 0.1	1	1B606-089-3	10	○△	FM2
* 1K050-029	662A	座金 Washer t = 0.05	0-4	1B670-020-8 1B670-021-8	8	○△	FM2
* 1K050-030	662B	座金 Washer t = 0.06	0-4	1B670-020-8 1B670-021-8	8	○△	FM2
* 1K050-031	662C	座金 Washer t = 0.07	0-4	1B670-020-8 1B670-021-8	8	○△	FM2
* 1K050-032	662D	座金 Washer t = 0.08	0-4	1B670-020-8 1B670-021-8	8	○△	FM2
* 1K050-033	662E	座金 Washer t = 0.09	0-4	1B670-020-8 1B670-021-8	8	○△	FM2
* 1K050-034	662F	座金 Washer t = 0.1	0-4	1B670-020-8 1B670-021-8	8	○△	FM2
* 1K050-035	662G	座金 Washer t = 0.11	0-4	1B670-020-8 1B670-021-8	8	○△	FM2
* 1K050-036	662H	座金 Washer t = 0.12	0-4	1B670-020-8 1B670-021-8	8	○△	FM2
* 1K050-037	662I	座金 Washer t = 0.2	0~4	1B670-020-8 1B670-021-8	8	○△	FM2
* 1K050-038	662J	座金 Washer t = 0.3	0~4	1B670-020-8 1B670-021-8	8	○△	FM2
* 1K050-039	662K	座金 Washer t = 0.4	0~4	1B670-020-8 1B670-021-8	8	○△	FM2

(4) FILM-ADVANCE LEVER UNIT FILM-ADVANCE MECHANISM UNIT

Fig. 1

(1) TOP COVER

Fig. 2

Unit, film-advance lever B408

Insulating tape #52

Unsolder Lead wires #1065 (white), #1068 (brown) and #1039 (purple)

⊕ #606 x 2
⊕ #602

(2) SHUTTER CONTROL UNIT

Fig. 3

Sprocket stopper spring #2496

⊖ #500

Film-advance gear

⊖ #650
Clutch cam spring #2412
Clutch cam #2414
Film-advance cam #2413
Washers #2663A - #2663F
Film-advance gear #2415

Fig. 11

Coupling lever, multi-exposure #2489

⊖ #2441
Washer #2479

Fig. 4

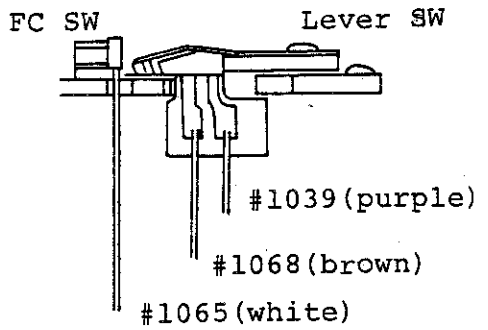
Sprocket stopper cam #429

⊖ #499 (left thread)
Screw #631
Tool: J11155

Unit, film-advance mechanism B403

⊕ #654 x 3

(4-1) WIRING OF FILM-ADVANCE LEVER UNIT



部 品 表 Parts list

FAA17001-R. 3115. A

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K050-040	662M	座金 Washer t = 0.5	0~4	1B670-020-8 1B670-021-8	8	○△	FM2
* 1K050-041	662N	座金 Washer t = 0.6	0~4	1B670-020-8 1B670-021-8	8	○△	FM2
* 1K050-042	662P	座金 Washer t = 0.7	0~4	1B670-020-8 1B670-021-8	8	○△	FM2
* 1K050-043	662Q	座金 Washer t = 0.8	0~4	1B670-020-8 1B670-021-8	8	○△	FM2
* 1K050-044	662R	座金 Washer t = 0.9	0~4	1B670-020-8 1B670-021-8	8	○△	FM2
* 1K050-045	662S	座金 Washer t = 1.0	0~4	1B670-020-8 1B670-021-8	8	○△	FM2
* 1K050-046	662T	座金 Washer t = 1.1	0~4	1B670-020-8 1B670-021-8	8	○△	FM2
* 1K050-047	662U	座金 Washer t = 1.2	0~4	1B670-020-8 1B670-021-8	8	○△	FM2
* 1K050-048	662V	座金 Washer t = 0.03	0~4	1B670-020-8 1B670-021-8	8	○△	FM2
* 1K050-050	355	座金 Washer	1	1B060-089-3	10	○△	FM2
* 1K050-058	198	座金 Washer t = 0.3	1	1B060-096-6		△	FM2
* 1K050-072	2427	座金 Washer t = 0.5	1	1B001-313-1		△	FM2
* 1K050-073	2479	座金 Washer t = 0.1	1		11	○	FM2
* 1K050-074	2655	座金 Washer	2		4	○	FM2

部 品 表 Parts list

FAA17001-R. 3115. A

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K050-075	2663A	座金 Washer t = 0.05	0~1		3	○	FM2
* 1K050-076	2655×2 2663B	座金 Washer t = 0.1	0~1		3	○	FM2
* 1K050-077	2663C	座金 Washer t = 0.2	0~1		3	○	FM2
* 1K050-078	2663D	座金 Washer t = 0.3	0~1		3	○	FM2
* 1K050-079	2663E	座金 Washer t = 0.25	0~1		3	○	FM2
* 1K050-080	2663F	座金 Washer t = 0.15	0~1		3	○	FM2
* 1K050-112	375	座金 Washer t = 0.3	1	1B670-020-8 1B670-021-8	9	○△	FM2
* 1K050-123	262A	座金 Washer t = 0.2	1	1B100-140	8	○△	35FB 943A
* 1K050-124	262B	座金 Washer t = 0.4	1	1B100-140	8	○△	35FB 943B
* 1K050-125	262C	座金 Washer t = 0.6	1	1B100-140	8	○△	35FB 943C
* 1K050-126	262D	座金 Washer t = 0.8	1	1B100-140	8	○△	35FB 943D
* 1K050-132	361	座金 Washer t = 0.06	0~1		10	○△	FM2
* 1K050-134	361	座金 Washer t = 0.08	0~1		10	○△	FM2
* 1K050-144	375	座金 Washer t = 0.1	0~1	1B670-020-8 1B670-021-8	9	○△	

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K050−146	560	座 金 t = 0.2 Washer	1	1B001−271	5	○△	
* 1K050−108	211	座 金 Washer	1	1B001−018−2		△	
* 1K060−003	228	トメワ Ring	2	1B060−089−3	9,10	○△	FM2
* 1K060−004	299	トメワ Ring	1	1B060−089−3	10	○△	FM2
* 1K060−005−1	656	トメワ Ring	1	1B620−008−1 1B620−010−1	12	○△	FM2
* 1K060−020	518	トメワ Ring	1		6	○	357B # 659
* 1K078−007	497	鋼 球 ø Steel Ball	24	1B001−313		△	FM2
* 1K080−005	140	三角環保護カバー Protector, Triangular ring	2		11	○	FM2
* 1K080−017	22	エプロン Apron (chreme)	1	1B100−189		△	
* 1K080−018	22	エプロン (黒) Apron (black)	1	1B100−148		△	
* 1K083−030−1	227	指示銘板 Name Plate	1	1B060−093−1		△	
* 1K087−055	548	指標板 Lader Plate	1	1B485−010	6	○△	
* 1K100−034	118	耳 環 Eyerlet		1B001−085		△	FM2
* 1K100−035	139	三角環 Triangular ring	2		11	○	FM2

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs.per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K110-082	2042	緩衝ゴムA Shock absorbar A	1		12	○	FM2
* 1K115-154	94	モルトプレン Light - tight	1	1B620-014-5	13	○△	FM2
* 1K115-155	95	モルトプレン Light - tight	1	1B620-014-5	13	○△	FM2
* 1K115-156	96	モルトプレン Light - tight	1	1B620-014-5	13	○△	FM2
* 1K115-157	97	モルトプレン Light - tight	2	1B620-014-5	13	○△	FM2
* 1K115-180	34	ゴム板 Rubber Plate	1	1B670-016-4 1B670-019-4	1	○△	FM2
* 1K115-183-1 (1K115-183)	111	擬革 Leatherette	1		8	○	FM2
* 1K115-186	156	溝用モルトプレン Light - tight, lower body	1		14	○	FM2
* 1K115-187	157	モルトプレン Light - tight	1	1B670-020-8 1B670-021-8	9	○△	FM2
* 1K115-188	158	接眼下部遮光モルト Light - tight, eyepice	1		11	○	FM2
* 1K115-189	159	上溝用モルトプレンA Light-tight A, upper body	1		14	○	FM2
* 1K115-190	160	上溝用モルトB Light-tight B, upper body	1		14	○	FM2
* 1K115-191-1	161	モルトプレン Sponge strip, mirror	1	1B670-020-8 1B670-021-8	8	○△	FM2
* 1K115-192-1	162	モルトプレン Sponge strip, eyepiece	1		11	○	FM2

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K115-193	177		2	1B001-091-3		△	FM2
* 1K115-194	181	絶縁板B Insulator B	1	1B001-091-3		△	
* 1K115-195	327	ミラースイッチ絶縁カラー Insulator, mirror switch	1	1B314-053-2		△	
* 1K115-196	357	モルトプレン Sponge strip	1	1B060-089-3	10	○△	FM2
* 1K115-198	402	擬革 Leatherette	1		2	○	FM2
* 1K115-203	261	レンズ着脱ボタン Lens release button	1	1B670-020-8 1B670-021-8	9	○△	FM2
* 1K115-220-3 (1K115-220)	303	植毛紙 Baffle cloth	1	1B100-138-1	9	○△	FM2
* 1K115-233	52	絶縁テープ Insulating tape	9	1B670-016-4 1B670-019-4 1B670-020-8 1B670-021-8	1,11,2	○△	FM2
* 1K115-293	61	LED遮光板 Light-tight, LED	1	1B670-016-4 1B670-019-4	1	○△	FM2
* 1K115-301-1	2093	裏蓋擬革 Leatherette	1	1B620-014-5	13	○△	FM2
* 1K115-391-1 (1K115-391)	305	植毛紙 Baffle cloth	1	1B100-138-1	9	○△	FM2
* 1K115-460	383	植毛シート Baffle cloth	1	1B001-265	9	○△	
* 1K115-461	384	植毛シート Baffle cloth	1	1B001-265	9	○△	
* 1K115-462	385	植毛シート Baffle cloth	1	1B001-265	9	○△	

部 品 表 Parts list

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部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K115-477	37	擬革 Leatherette	1	1B670-016-4 1B670-019-4	1	○△	35FB #78
* 1K115-478	154	擬革 Leatherette	1		14	○	35FB #56
* 1K115-479	155	擬革 Leatherette	1		14	○	
* 1K115-480	370	植毛シート Baffle cloth	1	1B060-089-3	10	○△	
* 1K115-481	379	モルトプレン Light-tight	1	1B001-263-1		△	FM2
* 1K115-488-1	232	ペンタ押えシート Prism retainer	1		8	○	
* 1K115-494-1	505	絶縁板 Insulator	1	1B001-267FA1		△	
* 1K115-495	506	絶縁板 Insulator	1	1B060-100-4 1B060-098-4	6	○△	
* 1K115-507	369	絶縁板 Insulator	1	1B060-088-2		△	FM2
* 1K115-592	229	絶縁テープ Insilating tape	2			×	
* 1K120-003	671	コネジ 1.7×3.0 Screw	3		6	○	
* 1K120-028	672	コネジ 1.4×1.6 Screw	6	1B060-097-1 1B060-098-4 1B060-099-1 1B060-100-4	6	○△	
* 1K120-029-1	623	コネジ 1.7×3.0 Screw	1	1B060-089-3	10	○△	FM2
* 1K120-015	676	コネジ 1.4×2.0 Screw	3		6	○	

部 品 表 Parts list

FAA17001-R. 3115. A

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs.per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K120-051	314	絞りレバーネジ Screw	1	1B670-020-8 1B670-021-8	9	○△	FM2
* 1K120-052	326	コネジ 1.7×2.5 Screw	1	1B060-089-3	10	○△	FM2
* 1K120-053	499	コネジ 1.7×2.5 Screw	1		4	○	FM2
* 1K120-054	500	コネジ 1.4×3.0 Screw	1	1B001-313-	3	○△	FM2
* 1K120-060-1 (1K120-060)	650	コネジ 2.0×3.5 Screw	2	1B670-020 1B670-021	3,4	○	FM2
* 1K120-061	652	コネジ 1.7×4.0 Screw	1		4	○	FM2
* 1K120-063	654	コネジ 2.0×3.0 Screw	3		3	○	FM2
* 1K120-064	649	コネジ (黒) Screw	1	1B670-021-8		○△	FM2
* 1K120-092	649	コネジ 1.7×3.0 Screw	1	1B670-020-8	7	○△	FM2
* 1K120-114	649	コネジ 1.7×6.0 Screw	3		5	○	
* 1K120-122	644	コネジ Screw	1	1B060-096-6	2	○△	FM2
* 1K120-139	559	コネジ Screw	1	1B001-271	5	○△	
* 1K123-034	98	裏蓋着脱ピン Pin, camera back release	1	1B620-014-5	13	○△	FM2
* 1K123-038	628	セルフ, ネジ Screw, self-timer	1	1B670-020-8 1B670-021-8	8	○△	FM2

部 品 表 Parts list

FAA17001-R. 3115. A

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K123-039	647	バヨネット止めネジ Screw, bayonet	4	1B670-020-8 1B670-021-8	7	○△	FM2
* 1K123-040	648	コネジ Screw	1		12	○	FM2
* 1K123-042	643	前板取付ネジ Screw, front plate	7	1B670-020-8 1B670-021-8	8×7	○△	FM2
* 1K123-051	615	コネジ Screw	1	1B060-096-6	2	○△	FM2
* 1K123-059	667	コネジ Screw	2	1B060-097-1 1B060-099-1	6	○△	
* 1K126-017	151	コネジ Screw	1	1B670-020-8 1B670-021-8	9	○△	35FB # 42-1
* 1K130-052	66	レリーズ板, ネジ Screw, release plate	2		11	○	FM2
* 1K130-053	72	プリント板ネジ Screw, circut board	3	1B670-020-8 1B670-021-8	9, 11	○△	FM2
* 1K130-055	164	二重巻上防止バネ Spring, double-exposure preventing	1		12	○	FM2
* 1K130-056-1	165	チャージ レバー ネジ Screw, shutter charge lever	1		4	○	FM2
* 1K130-057-1 (1K130-057)	167	ミラー チャージ レバー ネジ Screw, mirror charge lever	2		12	○	FM2
* 1K130-058-1 (1K130-058)	334	バネ止ネジ Screw, mirror down spring	1	1B670-020-8 1B670-021-8	9	○△	FM2
* 1K130-063-1 (1K130-063)	474	ロックレバー軸 Lock lever axle	1		12	○	FM2
* 1K130-096	2433	スプロケット ネジ Sprocket screw	1		4	○	FM2

部 品 表 Parts list

FAA17001-R. 3115. A

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K130-097	2435	スプロケット ネジ Sprocket screw	1		4	○	FM2
* 1K130-098	2441	面カム外しレバー Axle, clutch cam release lever	1		11	○	FM2
* 1K130-141	544	コネジ Screw	1		6	○	35FB = 689
* 1K130-152-1 (1K130-152)	473	コネジ Screw	1	1B060-096-6	2	○△	
* 1K136-015	368	コネジ Screw	1	1B670-020-8 1B670-021-8		△	
* 1K146-016	116	レールネジ Screw	1		14	○	FM2
* 1K146-017-1 (1K146-017)	403	レバー押えネジ Screw, film-advance lever	1	1B060-096-6	2	○△	FM2
* 1K146-018-1 (1K146-018)	403	レバー押えネジ (黒) Screw, film-advance lever	1			○	FM2
* 1K146-035	664	コネジ Screw	1	1B670-020-8 1B670-021-8	9	○△	
* 1K150-008	405	レバ軸ナット Nut, film-advance lever axle	1	1B060-096-6	2	○△	FM2
* 1K156-024	311	ナット Nut	1	1B314-080		△	FM2
* 1K160-180	493	座 金 t = 0.1 Washer	1	1B670-016-4 1B670-019-4	1	○△	FM2
* 1K160-181	493	座 金 t = 0.188 Washer	1	1B670-016-4 1B670-019-4	1	○△	FM2
* 1K130-170-1	209	バネ掛ピン Pin, spring hock	1	1B060-088-2	9	○△	

部 品 表 Parts list

FAA17001−R. 3115. A

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs.per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K160−182	493	座金 t = 0.25 Washer	1	1B670−016−4 1B670−019−4	1	○△	FM2
* 1K160−253	542	座金 Washer	1	1B060−098−4 1B060−100−4	6	○△	
* 1K201−013	563	巻戻しノブ Rewind knob	1		6	○	FM2
* 1K201−014	567	巻戻しツマミ Rewind handle	1	1B314−049		△	FM2
* 1K206−001	401	巻上げレバー Film− advance lever	1	1B206−004−1		△	FM2
* 1K206−002	491	多重撮りツマミ Multi−exposure knob	1	1B670−016−4 1B670−019−4	1	○△	FM2
* 1K208−009	217	着脱ボタン Lens release button	1	1B001−098−2		△	FM2
* 1K208−031	577	ボタン Button	1	1B208−008		△	
* 1K220−031	99	裏蓋着脱バネ Spring, camera back release	1	1B620−014−5	13	○△	FM2
* 1K220−036−1 (1K220−036)	63	レリーズ ボタン バネ Spring, shutter release button	1	1B670−016−4 1B670−019−4	1	○△	FM2
* 1K220−037−1	65	レリーズ板バネ Spring, release plate	1		11	○	FM2
* 1K220−038−1	83	止め爪カバー Latch cover	1		14	○	FM2
* 1K220−039	498	スプロケット バネ Sprocket spring	1		4	○	FM2
* 1K220−041	213	着脱ピン押えバネ Spring, lens release pin	1	1B001−098−2	9	○△	FM2

(5) SPOOL Fig. 4

Set cams B206A -B206D

⊖ #650

Spool shaft bearing case B204

⊕ #605 x 3

Spool shaft B2203

Spool B2202

(6) MD SWITCH CIRCUIT BOARD Fig. 12

Bottom cover B019

⊕ #610 x 3

Motor coupling #138

⊕ #652

Lever, double-exposure preventing #175

⊕ #164

Hook the spring as shown in the figure below.

MD switch circuit board B103

Unsolder Lead wires

#1040 (green) and #1039 (purple)

Refer to the figure below.

⊕ #602

Shutter charge lever B104

⊕ #165

Set cam collar #171

Lock lever, MD see-saw lever

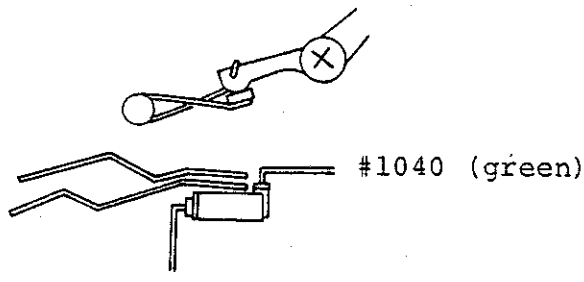
⊖ #474

Lock lever spring #465

Unit, film-advance lever
Unit, film-advance mechanism

Fig. 4

Spool top gear B2207



(6-1) Lead wires to MD switch circuit board spring, double-exposure preventing lever

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K220−042−1	216	着脱ボタンバネ Spring, lens relese button	1	1B670−020 1B670−021		△	FM2
* 1K220−064	2446	フリクション バネ Friction spring	1	1B001−128−3		△	FM2
* 1K220−096	-521	フリクション バネ Friction spring	1		6	○	35FB # 662
* 1K225−042−1	128	振り子バネ Pendulum spring	1		12	○	FM2
* 1K225−043−2	341	アップ バネ Spring , mirror−up lever	1	1B060−089−3	10	○△	FM2
* 1K225−044−2	347	慣性体バネ Spring, mirror mechanism gear	1	1B060−089−3	10	○△	FM2
* 1K225−045	565	巻戻軸受，板用バネ Spring , rewind shaft bearing	1	1B310−030		△	35FB # 655
* 1K225−075−1	207	引張バネ Spring	1	1B670−020−8 1B670−021−8	7	○△	
* 1K230−025−1	176	二重巻上防止バネ Spring, double−exposure preventing	1	1B001−091−3		△	FM2
* 1K230−114	190	ネジリ線バネ Spring	1	1B060−096−6	2	○△	
* 1K230−028	313	手動絞りバネ Spring , stop − down	1	1B670−020−8 1B670−021−8	9	○△	FM2
* 1K230−029−1 (1K230−029)	339	45°ストッパー バネ 45° stopper spring	1	1B060−089−3		△	FM2
* 1K230−030−2	340	絞りレバーバネ Aperture lever spring	1	1B060−089−3	1	○△	FM2
* 1K230−031−2	343	ダウン レバー バネ Mirror down spring	1	1B670−020−8 1B670−021−8	1	○△	FM2

部 品 表 Parts list

FAA17001－R. 3115. A

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K230-032	348	レリーズ レバー バネ Release lever spring	1	1B060-089-3	10	○△	FM2
* 1K230-033-1	349	ミラーアップ押えバネ Spring, mirror-up stop lever	1	1B060-089-3	10	○△	FM2
* 1K230-034	352	係止レバー バネ Spring, latch lever	1	1B060-089-3	10	○△	FM2
* 1K230-035-1	378	チリ取りバネ Spring, mirror－up lever	1	1B670-020-8 1B670-021-8	10	○△	FM2
* 1K230-039	406	レバー戻しバネ Spring, film－advance lever reverse	1	1B060-096	2	○△	FM2
* 1K230-041	450	スプロストッパー バネ Spring, sprocket stopper rever	1	1B001-313-1	3	○△	FM2
* 1K230-043	465	ロックレバー バネ Lock lever spring	1		12	○	FM2
* 1K230-044-1	466	スプール軸バネ Spring, spool shaft	1	1B001-132-2		△	FM2
* 1K230-077	2197C	零戻しレバー 戻しバネ軸 Axle, cuoter reset lever	1	1B060-096-6	2	○△	FM2
* 1K230-108	476	バ ネ Spring	1	1B060-096-6		△	FM2
* 1K233-014	41	バ ネ Spring	1	1B670-016-4 1B670-019-4		△	FM2
* 1K233-016-2	233	プリズム押えバネ Prism retainer spring	2		8	○	FM2
* 1K240-033-1	84	板バネ Spring	1	1B620-014-5		△	FM2
* 1K240-046-1	50	板バネ Spring	1	1B670-016-4 1B670-019-4		△	FM2 FG

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K240−047	51	板バネ Spring	1	1B240−003		△	FM2
* 1K240−048	69	板バネ Spring	1	1B314−056−7		△	FM2
* 1K240−050	146	板バネ Spring	1	1B060−122−1		△	FM2
* 1K240−051	178	板バネ Spring	1	1B001−091−3		△	FM2
* 1K240−052	179	板バネ Spring	1	1B001−091−3		△	FM2
* 1K240−054	345	板バネ Spring	1	1B100−138−1		△	FM2
* 1K240−055	346	板バネ Spring	1	1B100−138−1		△	FM2
* 1K240−056−1	364	板バネ Spring	1	1B060−088−2		△	FM2
* 1K240−057−2	365	板バネ Spring	1	1B060−088−2		△	FM2
* 1K240−049	74	板バネ Spring	1	1B001−086		△	FM2
* 1K240−064−1	566	レバー受バネ Rewind crank spring	1		6	○	FM2
* 1K240−065−1	208	バヨネット バネ Bayonet spring	1	1B670−020−8 1B670−021−8	7	○△	FM2
* 1K240−068	244	板バネ Spring		1B001−099−2		△	FM2
* 1K240−069	288	板バネ Spring	1	1B100−139−2		△	FM2

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K240−070	289	板バネ Spring	1	1B100−139−2		△	FM2
* 1K240−074	260	SPDプリント板押え Retainer, SPD circuit board	1		8	○	
* 1K240−090−1	206	板バネ Spring	1	1B640−018		△	FG
* 1K240−118−2 (1K240 118)	49	シュー バネ Shoe contact spring	1	1B670−016−4	1	○△	
* 1K240−156	240	スクリーン ロック バネ Spring, focusing screen lock	1	1B670−020−8 1B670−021−8	8	○△	
* 1K240−190	236	板バネ Spring	1	1B100−140		△	35FB # 236
* 1K240−191	237	板バネ Spring	1	1B100−148 1B100−189	7	○△	
* 1K240−192	238	板バネ Spring	1	1B100−140		△	35FB # 238
* 1K240−194	286	板バネ Spring	1	1B100−139−2		△	
* 1K240−195	287	板バネ Spring	1	1B100−139−2		△	
* 1K240−196−1	529	板バネ Spring	1	1B060−098−4 1B060−100−4	6	○△	
* 1K240−197	532	板バネ Spring	1	1B060−097FA1 1B060−097−1		△	
* 1K240−198	535	板バネ Spring	1	1B001−268		△	
* 1K240−199	536	板バネ Spring	1	1B001−268		△	

部 品 表 Parts list

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部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K240－201－1	263	板バネ Spring	1		8	○	
* 1K240－202	153	板バネ Spring	1	1B060－090		△	
* 1K240－204－2	231	板バネ Spring	1		8	○	
* 1K240－209	502	板バネ Spring	1	1B001－267FA1		△	
* 1K240－210	503	板バネ Spring	1	1B001－267FA1		△	
* 1K240－211	366	板バネ Spring	1	1B060－088－2		△	35FB ∓927
* 1K240－212	367	板バネ Spring	1	1B060－088－2		△	
* 1K240－213	481	板バネ Spring	1	1B060－095		△	
* 1K240－215－1	49	シュー バネ (黒) Shoe contact spring	1	1B670－019－4		○△	
* 1K240－203	183	板バネ Spring	1	1B060－090		△	
* 1K240－238－1	487	板バネ Spring	1	1B001－270		△	
* 1K246－016	546	ウェーブ ワッシャー Washer	1	1B060－099－1 1B060－097－1	6	○△	
* 1K260－008－4	333	平歯車 Gear	1	1B060－089－3		△	FM2
* 1K260－009－1	336	平歯車 Gear	1	1B260－002－1		△	FM2

部 品 表 Parts list

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部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K260－010－2	338	平歯車 Gear	1	1B060－089－3		△	FM2
* 1K260－011－1	344	平歯車 Gear	1	1B060－089－3		△	FM2
* 1K260－050	2194	送り爪レバー Advance claw gear	1	1B060－096－6	2	○△	FM2
* 1K260－052	2415	巻上ギア Film－advance gear	1		3	○	FM2
* 1K260－053	2416	平歯車 Gear	1	1B001－313－1		△	FM2
* 1K260－055－1	2420	平歯車 Gear	1	1B001－128－3		△	FM2
* 1K260－056	2431	スプロ上ギア Sprocket upper gear	1		4	○	FM2
* 1K260－078	193	平歯車 Gear	1	1B060－096－6	2	○△	
* 1K260－117	417	平歯車 Gear	1	1B001－313－1		△	
* 1K260－118	417	平歯車 Gear	1	1B001－313－1		△	
* 1K275－010	2470	特殊歯車 Gear	1		4	○	FM2
* 1K275－026	199	特殊歯車 Gear	1	1B060－096－6	2	○△	
* 1K300－034	429	スプロケット制限カム Sprocket stopper cam	1		4	○	FM2
* 1K310－019	443	平レバー Lever	1	1B001－313－1		△	FM2

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K310−038	543	平レバー Lever	1	1B310−030		△	35FB ＃688
* 1K314−050	79	止め爪B Latch B, camera back	1		14	○	FM2
* 1K314−051−3 (1K314−051)	129	振り子 Pendu lum	1		12	○	FM2
* 1K314−052−1	130	ロック レバー Lock−lever, MD sea−saw lever	1		12	○	FM2
* 1K314−053−1 (1K314−053)	166	ミラー チャージ レバー Mirror charge lever			12	○	FM2
* 1K314−054	169	曲げレバー Lever	1	1B314−051−2		△	FM2
* 1K314−055−1	174	曲げレバー Lever	1	1B001−091−3		△	FM2
* 1K314−056	175	二重巻上防止レバー Lever, double exposure preventing	1		12	○	FM2
* 1K314−057−1	310	曲げレバー Lever	1	1B314−080		△	FM2
* 1K314−058	315	曲げレバー Lever	1	1B314−054−2		△	FM2
* 1K314−059	317	曲げレバー Lever	1	1B060−089−3		△	FM2
* 1K314−060	321	曲げレバー Lever	1	1B060−089−3		△	FM2
* 1K314−061−1	322	曲げレバー Lever	1	1B314−053−2		△	FM2
* 1K314−062	323	曲げレバー Lever	1	1B060−089−3		△	FM2

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K314-064-1	329	ミラーアップ押えレバー Mirror－up stop lever	1	1B060-089-3	10	○△	FM2
* 1K314-063	328	曲げレバー Lever	1	1B060-089-3		△	FM2
* 1K314-065	354	曲げレバー Lever	1	1B060-089-3		△	FM2
* 1K314-069	444	曲げレバー Lever	1	1B001-393-1		△	FM2
* 1K314-080	418	曲げレバー Lever	1	1B060-096-6		△	FM2
* 1K314-104-3	2064	曲げレバー Lever	1	1B314-056-7		△	FM2
* 1K314-105	2196	零戻しレバー Frame countor reset lever	1	1B060-096-6		△	FM2
* 1K314-106-1	2484	曲げレバー Lever	1	1B060-096-6		△	FM2
* 1K314-141	109	曲げレバー Lever	1	1B314-081		△	
* 1K314-142	553	曲げレバー Lever	1	1B670-020-8 1B670-021-8		△	
* 1K314-143	554	曲げレバー Lever	1	1B314-082		△	
* 1K340-018	131	MD軸受け MD Shft bearing	1		12	○	FM2
* 1K340-019-1	168	チャージ レバー カラー Charge lever collar	1	1B314-051-2		△	FM2
* 1K340-020	171	セット カム カラー Set cam collar	1		4	○	FM2

部 品 表 Parts list

FAA17001－R. 3115. A

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs.per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K340－023	449	軸 受 Bearing	1	1B001－313－1		△	FM2
* 1K340－026	192	軸 受 Bearing	1	1B060－096－6		△	
* 1K340－040－1	2409	レバー軸受 Bearing	1	1B060－096－6		△	FM2
* 1K340－054	530	軸 受 Bearing	1	1B060－099－1 1B060－097－1		△	
* 1K340－055－1	533	軸 受 Bearing	1	1B060－098－4 1B060－100－4		△	
* 1K340－056	534	軸 受 Bearing	1	1B001－268		△	
* 1K360－007	53	押 棒 Switch plunger	1	1B670－016－4 1B670－019－4	1	○△	FM2
* 1K362－007－1	90	蝶番芯金B Hinge shaft B	1	1B620－014－5	13	○△	FM2
* 1K362－014	87	線 軸 Screw	1	1B620－014－5		△	FM2
* 1K366－010	67	ネ ジ Screw	1	1B314－056－7		△	FM2
* 1K366－011－1	356	3.1 偏心軸 3.1 eccentric axle	1	1B314－053－2		△	FM2
* 1K366－012	363	3.1 巾偏心軸 3.1 eccentric axle	1	1B060－089－3		△	FM2
* 1K366－013－1	391	45°出し調整ピン 45°adjusting pin	1	1B060－089－3		△	FM2
* 1K370－176－1	81	蝶番芯金A Pin , hinge shaft A	1	1B620－014－5		△	FM2

部 品 表 Parts list

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部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K370−177	82	止め爪用鋲 Rivet, stopper claw	2	1B620−014−5		△	FM2
* 1K370−179−1	86	フィルム ガイド ピン Film −guide pin	2	1B620−014−5		△	FM2
* 1K370−181	89	裏蓋蝶番Bカシメピン Pin, camera back hinge	3	1B620−014−5		△	FM2
* 1K370−189	33	巻戻釦 Rewind button	1	1B620−008−4 1B620−010−1	12	○△	FM2
* 1K370−191	57	埋金接点 Contact	2	1B680−012−1		△	
* 1K370−192	75	圧板鋲 Rivet, pressure plate	2	1B001−086		△	FM2
* 1K370−193	76	圧板ばね支え鋲 Rivet, pressure plate retainer	4	1B620−014−5		△	FM2
* 1K370−194	103	DB接点 Date back contact	1		14	○	FM2
* 1K370−195	108	セルフレバー軸 Self lever shaft	1	1B314−081		△	FM2
* 1K370−196	132	MD軸 MD Shaft	1		12	○	FM2
* 1K370−197−1	147	電池接片カシメ鋲 Rivet, battery contact	1	1B060−122−1		△	FM2
* 1K370−198	170	チャージ レバー ピン Pin, shutter charge lever	1	1B314−051−2		△	FM2
* 1K370−199−1	172	チャージ レバー ピン Pin, shutter charge lever	1	1B314−051−2		△	FM2
* 1K370−200−1	173	スイッチ レバー軸 Axle, MD switch lever	1	1B001−091−3		△	FM2

(7) SPROCKET Fig. 4

(4) Film-advance lever unit
Film-advance mechanism unit

↓

Sprocket upper gear #2431

↓

Sprocket shaft bearing #438

Tool: J11118

↓

Sprocket shaft #2434
Washer #2655 x 2
Sprocket screw #2435
Sprocket spring#498

↓

Sprocket screw #2433

↓

Sprocket #2470

(8) BOTTOM COVER INSTALLING Fig. 12

(5) Bottom cover

↓

Battery chamber lid B030

↓

AR lever #126

⊕ #604

↓

MD external contact B106

Unsolder Lead wires #1040 (green), #1042 (orange) and #1046 (black)

⊕ #625

↓

Battery chamber earth contact #143

Unsolder Lead wires #1046 (black) and #1066 (black)

⊕ #622

↓

MD shaft bearing #131

⊕ #648

Screw, mirror charge lever #167

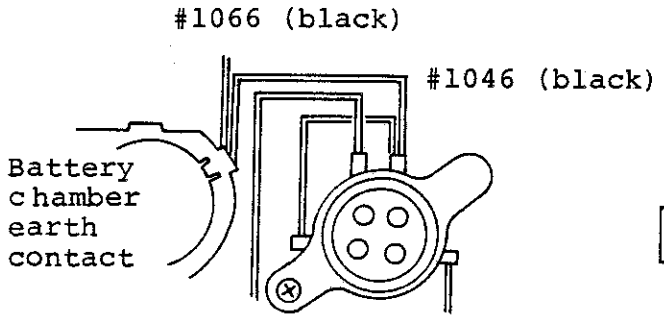
MD see-saw lever #133

MD shaft #132

↓

Mirror charge lever #166

⊕ #167



(7-1) Lead wires to MD external contact and battery chamber earth contact

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K370－203－1	302	チリトリ軸 Axle, mirror holder	1	1B001－263－1		△	FM2
* 1K370－204	306	チリトリ駆動板カシメピン Pin, mirror holder	4	1B100－138－1		△	FM2
* 1K370－207－1	312	絞りレバーばね軸 Axle, aperture lever spring	1	1B314－054－2 1B060－089－3		△	FM2
* 1K370－208	319	係止はずし軸 Axle, mirror cock release	1	1B314－053－2 1B060－089－3		△	FM2
* 1K370－209	324	絞りレバー カラー Aperture lever collar	1	1B314－054－3 1B060－089－3		△	FM2
* 1K370－210	325	慣性ギア軸 Axle, mirror mechanism gear	1	1B060－089－3		△	FM2
* 1K370－211	330	ダウン レバー軸 Axle, mirror－down lever	1	1B060－089－3		△	FM2
* 1K370－212	331	ミラーアップ押えレバー軸 Axle, mirror－up stop lever	1	1B060－089－3		△	FM2
* 1K370－213	337	慣性体レバー軸 Axle, mirror inechanism lever	1	1B060－089－3		△	FM2
* 1K370－214－1	342	FWアイドルギア軸 Axle, FW idle gear	1	1B060－089－3		△	FM2
* 1K370－215	351	ミラー ダウン バネ軸 Axle, mirror－down spring	1	1B060－089－3		△	FM2
* 1K370－216	353	係止レバー軸 Axle, mirror coch lever	1	1B060－089－3		△	FM2
* 1K370－217	373	ミラー押えカシメピン Rivet, mirror holder	2	1B100－138－1		△	FM2
* 1K370－218	380	チリ取りバネ軸 Axle, mirror－lever spring	1	1B314－053－2 1B060－089－3		△	FM2

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K370−220	389	45 レバー軸 Axle, 45 stopper lever	1	1B060−089−3		△	FM2
* 1K370−224	440	逆点止爪軸 Axle, reverse stopper	1	1B001−313−1		△	FM2
* 1K370−225	448	スプロストッパー軸 Axle, sprocket stopper	1	1B001−313−1		△	FM2
* 1K370−227	458	セット カムピン Pin, set cam	1	1B300−007−6 1B300−008−7 1B300−009−7 1B300−010−8		△	FM2
* 1K370−240	568	巻戻つまみ軸 Axle, rewind crank knob	1	1B314−049		△	FM2
* 1K370−241−1	212	着脱ピン Lens release pin	1	1B001−098−1		△	FM2
* 1K370−242	215	着脱釦軸 Axle, lens release button	1	1B001−098−1		△	FM2
* 1K370−244−1	243	スクリーン バネ鋲 Rivet, fowsing screen spring	14	1B001−099−2		△	FM2
* 1K370−245	246	スクリーン軸 Axle, fowsing screen	1	1B060−089−3		△	FM2
* 1K370−246	247	チリ取軸 Axle, mirror holder	1	1B060−089−3		△	FM2
* 1K370−247−1	248	スクリーン棒軸 Axle, screen fram	1	1B001−263−1		△	FM2
* 1K370−358−1	105	DB アース接点 Date back earth contact	1		14	○	FM2
* 1K370−363−1	2045	レリーズ内筒 Release inner tube	1	1B670−016−4 1B670−019−4	1	○△	FM2
* 1K370−365	2426	軸受ケース カシメピン Pin, bearing case	1	1B001−313−1		△	FM2

部 品 表 Parts list

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部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K370－367	2434	スプロケット軸 Sprocket shaft	1		4	○	FM2
* 1K370－368－2	2453	スプール軸 Spool shaft	1	1B001－132－2		△	FM2
* 1K370－371	2482	巻上制限ピン Pin,fin－advance stopper	2	1B060－096－6		△	FM2
* 1K370－469－1	478	段付軸 Axle	1	1B060－096－4		△	FM2
* 1K370－479	549	段付軸 Axle	1	1B060－097－1 1B060－099－1		△	
* 1K370－482	54	段付軸 Axle	1	1B680－012－1		△	
* 1K370－483	386	段付軸 Axle	1	1B001－265		△	
* 1K370－485	388	段付軸 Axle	1	1B001－265		△	
* 1K370－486	511	巻戻軸 Rewind shaft	1			○	35FB ＝652－2
* 1K370－487	528	段付軸 Axle	1	1B060－098－4 1B060－100－4	6	○△	
* 1K370－489	556	段付軸 Axle	1	1B314－082		△	
* 1K370－499	307	段付軸 Axle	1	1B100－138－1		△	FM2
* 1K370－519－1	191	段付軸 Axle	1	1B060－096－6	2	△	
* 1K370－520－1	485	段付軸 Axle	1	1B060－096－6		△	

部 品 表 Parts list

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部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K370－521	150	段付軸 Axle	1	1B060－122－1		△	
* 1K380－014	55	ローレット ネジ Knureled screw	1	1B680－012－1		△	
* 1K400－076	39	ネジ マウント Screw mount	1	1B670－016－4 1B670－019－4		△	
* 1K400－077－1	62	レリーズ釦 Shutter release button		1B670－016－4 1B670－019－4	1	○△	FM2
* 1K400－078	117	三脚座 Tripod socket	1		12	○	FM2
* 1K400－079－1	38	接眼窓受 Eye piece mocent	1	1B670－016－4		△	FM2
* 1K400－082	38	Bayonet（black）	1	1B670－019－4		△	
* 1K404－030－1 （1K404－030）	202	バヨネット環 Bayonet	1	1B670－020－8 1B670－021－8	7	○△	FM2
* 1K406－014	48	Hシュー Hot shoe contact	1	1B670－016－4 1B670－019－4	1	○△	
* 1K467－016	120	ターミナル キャップ Cap terminal cap	1		11	○	FM2
* 1K467－017－1	142	電池キャップ Battery chamber lid	1	1B467－007－2		△	FM2
* 1K470－015	531	ASA目盛板 ASA disk	1	1B060－099－1 1B060－097－1 1B060－098－4	6	○△	
* 1K470－023	575	シャッター目盛板 Shutter dial	1	1B201－013		△	
* 1K470－028	558	Tフィルム Shutter speeds inner indicator	1	1B001－271	5	○△	

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K475-158-1	188	枚数計目盛板 Framecounter dial	1	1B060-096-6	2	○△	
* 1K480-005	2200	指標板 Framecounter index	1	1B060-096-6	2	○△	FM2
* 1K485-050	527	指標環 Index ring	1	1B060-097-1		△	
* 1K485-055	5272	指標環 Index ring	1	1B060-099-1		△	
* 1K576-027	257	絞り板 Aperture plate	2	1B100-139-2		△	FM2
* 1K576-040-1	251	視野枠 Finder field frame	1		8	○	
* 1K580-006-1	226	反射板 Reflection plate	1	1B060-093-1		△	
* 1K600-079	78	止め爪A Ratchet A	1	1B620-014-5		△	FM2
* 1K600-086	71	絶縁板B Insulating plate B	1	1B314-156-7		△	FM2
* 1K600-087	73	圧 板 Pressure plate	1			△	FM2
* 1K600-090-1	114	前板孔カバー Cover, front plate	1		8	○	FM2
* 1K600-091	115	前板孔カバー Cover, front plate	1		8	○	FM2
* 1K600-092-1 (1K600-092)	133	MDシーソー レバー MDsea－saw lever	1		12	○	FM2
* 1K600-093	137	絶縁シート Insulating sheet	1	1B001-092		△	FM2

部 品 表 Parts list

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部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K600－094－1	304	チリ取り駆動板 Plate, mirror holder	2	1B100－138－1		△	FM2
* 1K600－096	358	横基板カバー Cover, mirror box mechanism	1	1B060－089－3 1B670－020－8	10	○△	FM2
* 1K600－101－2	468A	ラチェット カム Ratchet cam	1	1B300－007－5 1B300－008－6 1B300－009－6 1B300－010－7		△	FM2
* 1K600－102－1	468B	ラチェット カム Ratchet cam	1	1B300－007－6 1B300－008－7 1B300－009－7 1B300－010－8		△	FM2
* 1K600－104	214	着脱ボタン ピン受 Plate, lens release pin	1	1B001－098－2		△	FM2
* 1K600－130	47	平 板 Plate	1		11	○	
* 1K600－151	2456	フリクション板 Friction plate	1	1B001－128－3		△	FM2
* 1K600－225	113	平 板 Plate	2		8	○	
* 1K600－226	547	平 板 Plate	1	1B060－097－1 1B060－098－4 1B060－099－1	6	○△	
* 1K600－236－1	372	平 板 Plate	1	1B060－088－2		△	
* 1K610－163	88	裏蓋蝶番B Camera back hinge B	1	1B620－014－5		△	FM2
* 1K610－168	77	裏蓋蝶番A Camera back hinge A	1	1B620－014－5	14	○△	FM2
* 1K610－169－1 (1K610－169)	80	止め爪カバー Latch cover			14	○	FM2
* 1K610－170	112	遮光板 Light－tight	1	1B670－020－8 1B670－021－8	9	○△	FM2

部 品 表 Parts list

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部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K610－172－1 (1K610－172)	126	ARレバー ARレバー	1		12	○	FM2
* 1K610－173	143	電池アース Battery chamber earth contact	1		12	○	FM2
* 1K610－174	148	電池⊕接片B Contact positive B, batter	1	1B060－122－1		△	FM2
* 1K610－175－1	182	MDスイッチ基板 MD Switch baseplate	1	1B001－091－3		△	FM2
* 1K610－177	301	チリ取り Mirror holder	1	1B100－138－1		△	FFM2
* 1K610－178－1	308	インサート板 Insert plate	1	1B206－002－1		△	FM2
* 1K610－185	410	巻上げレバー ブッシュ Bush film－advance lever	1	1B206－002－1		△	FM2
* 1K610－187	447	スプロストッパー Sprocket stopper	1	1B001－313－1		△	FM2
* 1K610－192－2	300	横基板 Plate, mirror box plate	1	1B060－089－3		△	FM2
* 1K610－205	254	接眼横遮光板 Light baffle, eyepiece	2	1B100－139－2		△	FM2
* 1K610－206－1	255	接眼レンズ押え板 Retainer, eyepiece lens	1	1B100－139－2		△	FM2
* 1K610－253	542	目盛貼付環 押え環 Retainer, ASA calibration ring	1	1B060－098－4 1B060－100－4		△	35FB ∓687
* 1K610－266－1	2125	緩衝板 Shock absorber	1		12	○	FM2
* 1K610－267－2 (1K610－267－1)	2195	送り爪バネ Advance claw lever	1	1B060－096－6	2	○△	FM2

部 品 表 Parts list

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部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K610−270	2407	スプロ制限除板 Plate, sprocket stopper release	1	1B060−096−6	2	○△	FM2
* 1K610−271−1 (1K610−271)	2412	面カム板バネ Clutch cam spring	1		3	○	FM2
* 1K610−272−2	2414	面カム Clutch cam	1		3	○	FM2
* 1K610−273−1	2445	曲げ板 Plate	1	1B001−313−1		△	FM2
* 1K610−275	2483	クリック レバー バネ Click lever spring	6	1B060−096−6	2	○△	FM2
* 1K610−277−1	2490	多重撮り連結レバー Multi −exposure lever	1	1B060−096−6	2	○△	FM2
* 1K610−278	2496	スプロケット制限バネ Sprocket stopper spring	1	1B001−313−1	3	○△	FM2
* 1K610−280	2085	曲げ板 Plate	1	1B620−014−5		△	
* 1K610−379	382−5	曲げ板 Plate	1	1B001−265		△	
* 1K610−406	230	曲げ板 Plate	1		8	○△	
* 1K610−407	235	曲げ板 Plate	1	1B100−140		△	35FB # 235
* 1K610−408	149	曲げ板 Plate	1	1B670−020 1B670−021−8	9	○△	
* 1K610−409	332−2	曲げ板 Plate	1	1B001−263−1		△	FM2
* 1K610−411	526−3	曲げ板 Plate	1	1B001−207FA1 1B060−098−4 1B060−100−4		△	FM2

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K610－413－3	451－6	曲げ板 Plate	1	1B060－096－6		△	FM2
* 1K610－437	472－1	曲げ板 Plate	1	1B001－270－1		△	
* 1K610－438	578	曲げ板 Plate	1	1B208－008		△	
* 1K620－019	24	底 蓋 Bottom cover	1	1B620－008－4		△	FM2
* 1K620－021	136	外部接点ラグ板 MD exterral contact lug	4	1B001－092		△	FM2
* 1K620－032－1	245	スクリーン棒 Screen frame	1	1B001－099－2		△	FM2
* 1K620－047	2462	スプール上ギアナット Nut, spool upper gear	1	1B001－128－3		△	FM2
* 1K620－065	23－1	上カバー Top cover	1	1B670－016－4		△	
* 1K620－066	250	プリズム ボックス Prism box	1	1B670－021－8 1B670－020－8	8	○△	
* 1K620－069	23	上カバー (黒) Top cover (black)	1	1B670－019－4		△	
* 1K625－006	110	セルフ作動板 Plate, self－timer	1	1B206－003－1		△	FM2
* 1K625－007－2 (1K625－007－1)	189	枚数計窓 Frame counter window	1	1B670－016－4 1B670－019－4	1	○△	FM2
* 1K625－008－2	459A	セット カム Set cam	1	1B300－007－6 1B300－008－7		△	
* 1K625－009－4	459B	セット カム Set cam	1	1B300－009－7 1B300－010－8		△	

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K625−010	564	巻戻しレバー Rewind lever	1	1B314−049		△	
* 1K625−027−1	452	下地板，基板 Baseplate, film advance mechanism	1	1B001−313−1		△	
* 1K630−080	43	レリーズボタン飾り環 Cover ring, shutter release button	1	1B670−016−4 1B670−019−4	1	○△	FM2
* 1K630−081−1 (1K630−081)	104	DB絶縁樹脂 Date back insulator	1		14	○	FM2
* 1K630−082	144	電池ホルダー Battery holder	1	1B467−007−2		△	FM2
* 1K630−083	424	スプールギア内筒 Inner tube, spool gear	1	1B001−128−3		△	FM2
* 1K630−085	437	スプロカラーAナット Nut, sprocket collar	1		4	○	FM2
* 1K630−087	461	カップリング支柱 Coupling strut	1	1B300−007−6 1B300−008−7 1B300−009−7 1B300−010−8		△	FM2
* 1K630−090	218	着脱ボタン軸受 Lens		1B670−020−8 1B670−090−8	9	○△	
* 1K630−113	2421	スプール上ギアナット Nut, spool top gear	1	1B001−128−3		△	FM2
* 1K630−114	2436	スプロケット ローラーA Sprocket roller A	1		4	○	FM2
* 1K630−115	2455	スプール内筒 Spool inner tube	1	1B630−009		△	FM2
* 1K630−116	2460	スプール Spool	1	1B630−009		△	FM2
* 1K630−157	524−1	巻戻軸ガイド Rewind shft guide	1		6	○	35FB # 665−3

(9) SHUTTER, METER SWITCH, BATTERY CHAMBER Fig. 11

Front plate disassembling

Release plate B2101

⊖ #66 x 2
Release plate spring #65
Plate #47

Be careful of jumping of #65 and #47.

Pull B2101 forward to disengage its bottom end.

Circuit board, meter switch #70

Unsolder Lead wires
#1053 (orange) and #1042 (orange)
⊕ #72
⊕ #617

Shutter B100

⊕ #624
⊕ C #638
⊕ ŧ607

Battery chamber B105

⊕ #627 x 2

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K640－187	31	カップリング飾り環 Coupring cover ring	1	1B620－010－1 1B620－008－4		△	FM2
* 1K640－188	32	R釦スリーブ Sleave, rewind button	1	1B620－008－4 1B620－010－1		△	FM2
* 1K640－190	44	かぶせレリーズ環 Retainer, release button cover	1	1B670－016－4 1B670－019－4	1	○△	FM2
* 1K640－191	320	レリーズ レバー カラー Release lever ring	1	1B060－089－3		△	FM2
* 1K640－192	335	フライ ホィール Flywheel	1	1B260－002－1 1B060－089－3		△	FM2
* 1K640－198	432	スプロ軸受 Sprocket shaft bearing	1		4	○	FM2
* 1K640－199	438	スプロ軸受 Sprocket shaft bearing	1		4	○	FM2
* 1K640－201－1	454S	スプール軸受ケース Spool shaft bearing	1	1B340－001－2		△	FM2
* 1K640－202	457	ボール ケース Ball case	2	1B001－313－1 1B340－001－2		△	FM2
* 1K640－253	2404	枚数計押え板 Frame counter retainer	1	1B060－096－1	2	○△	FM2
* 1K640－254	2422	巻上軸受ケース Case, film－advance bearing	1	1B001－313－1		△	FM2
* 1K640－255	2425	アイドル ギア軸受ケース Case, idle gear bearing	1	1B001－313－1		△	FM2
* 1K640－256	2442	スプール座金 Spool washer	1	1B630－009		△	FM2
* 1K640－363	35	シャッターダイヤル飾り環 Cover ring, shutter dial	1	1B670－016－4	1	○△	

部 品 表 Parts list

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部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K640−355	423	ボール保持筒 Steel ball holder	1	1B001−313−1		△	
* 1K640−364	523	開閉ノブ O, C, knob	1		6	○	35FB # 664−1
* 1K640−293	220−1	連動環 Aperture cdepling ring	1	1B640−018		△	
* 1K640−298	219−1	バヨネット部丸環 Ring, bayonet	1	1B670−020−8 1B670−021−8		○△	
* 1K640−321	574	シャッター ダイヤル Shutter dial	1	1B201−013−1		△	
* 1K640−322	576	シャッター ダイヤル Sutter dial	1	1B201−013		△	
* 1K650−003	127	振り子偏心軸 Pendulum eccentric axle	1		12	○	FM2
* 1K660−022−4	2021	ボディ Body die − casting				×	FM2
* 1K670−024−2	26−2	前 板 Front plate	1	1B670−020−8		△	
* 1K680−097−2	68	絶縁板A Insulator A	1	1B314−056−7		△	FM2
* 1K680−098−1	91	メモホルダー Memo holder	1	1B620−014−5		△	FM2
* 1K680−101	135	MD外部接点受け Socket, MD external contact	1	1B001−092		△	FM2
* 1K680−102−3 (1K620−102−1)	138	モーター カップ リング Moter coupling	1		4	○	FM2
* 1K680−103−1	145−1	電池ケース Battery chmber	1	1B060−122−1		△	

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K680－104	180	絶縁板B Insulator B	1	1B001－091－3		△	FM2
* 1K680－106	362	ダウンレバーかんしょう板 Shockabsorber, mirror－down lever	1	1B060－089－3	10	○△	FM2
* 1K680－110	495	指あて Knob, film advance lever	1	1B206－004－1		△	FM2
* 1K680－113－2	259	接眼モールド Eyepiece mold	1	1B100－139－2		△	
* 1K680－169－2 (1K680－169)	2408	巻上軸 Film－advance shaft	1	1B060－096－6	2	○△	FM2
* 1K680－170－1	2413	巻上カム Film－advance cam	1		3	○	FM2
* 1K680－172－1	2489	Coupling lever, multi－exposure	1		11	○	FM2
* 1K680－240－1	252－1	中間枠 Spacer, screen frame	1		8	○	
* 1K680－241	377－1	PD 基板 PD Base plate	1	1B060－092		△	
* 1K680－242	561	巻戻し軸受 Rewind shaft bearing	1		6	○	
* 1K680－246	184－1	メモリーロックSW Memory lock switch	1	1B060－090		△	
* 1K680－253－1	504－1	ブロック Block	1	1B001－267FA1		△	
* 1K680－254	545	ブロック Block	1	1B485－010		△	
* 1K680－255－1	371－1	ブロック Block	1	1B060－088－2		△	

部 品 表 Parts list

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部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
* 1K680－256	475－1	ブロック Block	1	1B060－095		△	
* 1K680－267	492	ブロック Block	1	1B060－095		△	

部 品 表 Parts list

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部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
1S210-006	1005	I C I C MB44-12	1	1S007-030-4		△	
1S237-038	1004	I C I C M51026P	1	1S007-030-4		△	
1S250-003	1006	フォトダイオード Photo diode BS-100C	2	1S007-030 4		△	
1S250-007	1007	S P D BS502	39	1S007-030		△	
1S260-005	1008	L E D L E D SR506-D	1	1S007-032-1		△	
1S260-010	1009	L E D L E D SLP-114B	1	1B060-093 1		△	
1S310-009	1024	抵 抗 Resistor 3.3KΩ	1	1S007 030-4		△	
1S310-012	1032	抵 抗 Resistor 4.7KΩ	1	1S007-030-4		△	
1S310-015	1029	抵 抗 Resistor 180Ω	1	1S007-030 4		△	
1S310-020	1031	抵 抗 Resistor 1.5KΩ	1	1S007-030-4		△	
1S310-022	1001-4	抵 抗 Resistor 1KΩ	1	1S007-030-4		△	
1S310-024	1025	抵 抗 Resistor 150KΩ	1	1S007-030-4		△	
1S310-031	1026	抵 抗 Resistor 100KΩ	1	1S007-030-4		△	
1S118-001	1012	グレオード Diode RB5.1EB-B(2)	1	1S007-030-4		△	

部 品 表 Parts list

FAA17001-R. 3115. A

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs.per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
1S130-009	1010	トランジスタ Transistor 2SC1623	1	1S007-030		△	
1S130 008	1011 2	トランジスタ Transistor 2SC1622A	1				
1S310 034	1027	抵抗 Resistor 22KΩ	1	1S007-030-4		△	
1S322 017	210	F－Fo 基板 F-Fo base plate	1	1B060 091-1		△	
1S322-018	501-1	プリント基板 Printed circueit board	1	1S007-030-4		△	
1S322-019	1003	抵抗 Resistor	1	1S007-030-4		△	
1S335-008	1021	セラミックコンデンサー Condencor	1	1S007-030-4		△	
1S335-009	1019	セラミックコンデンサー Condencor	1	1S007-030-4		△	
1S335-028	1020-1	セラミックコンデンサー Condencor	1	1S007-030-4		△	
1S340-025	1018	タンタルコンデンサー Condencor	1	1S007-030 4		△	
1S340-030-1	1016	タンタルコンデンサー Condencor	1	1S007-030-4		△	
1S340-031	1017	タンタルコンデンサー Condencor	1	1S007-030-4		△	
1S382-003	1015-1	クリスタル振動子 Quartz oscillator	1	1S007-030-4		○△	
1S700-009	70	半押しプリント板 Circuit boad, meter switch	1		11	○	FM2

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
1S705-021 1	507	F P C F P C	1	1B060-097FA1 1B060-97-1		△	
1S705-022-2	1001	F P C F P C	1	1S007-030-4		△	
1S705-023-1	1002	F P C F P C	1	1S007-032-1		△	
1S705-028	488	F P C F P C	1	1B060-096-6		△	
1S810-059	1040	リード線 Lead wire	1			×	W-0056 GN
1S810-060	1039	リード線 Lead wire	1			×	W-0056 PU
1S810-261	1036	リード線 Lead wire	1			×	W-0056 YE
1S810-262	1037	リード線 Lead wire	1			×	W-0056 QR
1S810-263	1038	リード線 Lead wire	1			×	W-0056 PU
1S810-266	1041	リード線 Lead wire	2			×	W-0056 BK
1S810-267	1042	リード線 Lead wire	1			×	W-0056 QR
1S810-268-1	1043	リード線 Lead wire	1			×	W-0056 BE
1S810-269-1	1044	リード線 Lead wire	1			×	W-0056 BE
1S810-270	1045	リード線 Lead wire	1			×	W-0056 RE

部 品 表 Parts list

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部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
1S810-272	1047	リード線 Lead wire	1			×	W-0056 WH
1S810-273	1048	リード線 Lead wire	1			×	W-0056 WH
1S810-274	1049	リード線 Lead wire	1			×	W-0056 BE
1S810-275	1050	リード線 Lead wire	1			×	W-0056 PU
1S810-276-1	1051	リード線 Lead wire	1			×	W-0056 PU
1S810-277-1	1052	リード線 Lead wire	1			×	W-0056 GN
1S810-278-1	1053	リード線 Lead wire	1			×	W-0056 QR
1S810-279	1054	リード線 Lead wire	1			×	W-0056 YE
1S810-280	1055	リード線 Lead wire	1			×	W-0056 BK
1S810-281	1056	リード線 Lead wire	1			×	W 0056 GU
1S810-282	1057	リード線 Lead wire	1			×	W-0056 PU
1S810-283	1058	リード線 Lead wire	1			×	W-0056 GY
1S810-284	1059	リード線 Lead wire	1			×	W-0056 QR

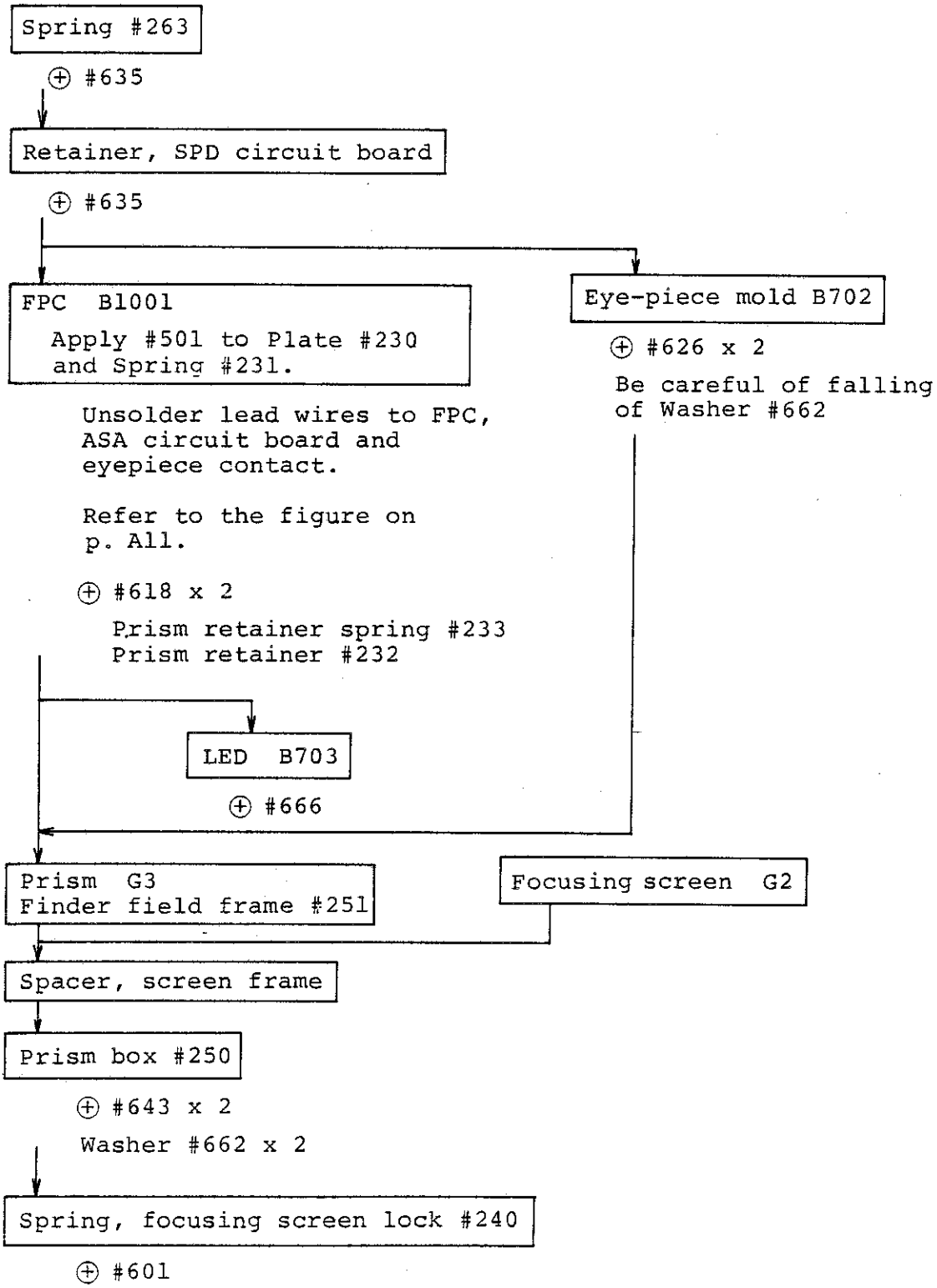
部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
1S810-285	1060	リード線 Lead wire	1			×	W-0056 PU
1S810-286 1	1061	リード線 Lead wire	1			×	W-0056 BN
1S810 287	1062	リード線 Lead wire	1			×	W-0056 GY
1S810-288	1063	リード線 Lead wire	1			×	W-0056 GN
1S810-289	1064	リード線 Lead wire	1			×	W-0056 BN
1S810-290	1065	リード線 Lead wire	1			×	W-0056 WH 0
1S810-291	1066	リード線 Lead wire	1			×	W-0056 BK 0
1S810-292	1067	リード線 Lead wire	1			×	W-0056 RE
1S810-298	1069	リード線 Lead wire	1			×	W-0056 YE
1S810-299	1068	リード線 Lead wire	1			×	W-0056 BN

部 品 表 Parts list

FAA17001-R. 3115. A

部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
A1-14020FD	637	コネジ Screw	1		8	○△	
A1-17015FB	601	コネジ Screw	1		8	○△	FM2
A1-17018FB	634	コネジ Screw	3		9 12	○△	FM2
A1-17030FA	602	コネジ Screw	2		2 12	○	
A1-17030FC	603	コネジ Screw	3		1	○	FM2
A1-17055FC	670	コネジ Screw	2		1	○	
A1-20022FB	605	コネジ Screw	3		4	○	FM2
A1-20025	604	コネジ Screw	1		12	○	FM2
A1-20030	624	コネジ Screw	1		11	○	FM2
A1-20030	606	コネジ Screw	5		2 6	○	FM2
A1-20070	607	コネジ Screw	1		11	○	FM2
A2-17025	609	コネジ Screw	1	1B670-020-8 1B670-021-8	10	○△	FM2
A2-17025	610	コネジ Screw	3		12	○	FM2
A2-17030	611	コネジ Screw	2		14	○	FM2

(10) FPC, PRISM BOX Fig. 8



部 品 表 Parts list

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部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
B1−17022FB	616	コネジ Screw	2	1B670 020−8 1B670−021−8	9	○△	FM2
B1−17025FA	617	コネジ Screw	3		6 11	○	FM2
B1−17025FB	618	コネジ Screw	5	1B670−020−8 1B670−021−8	7 8 10	○△	FM2
B1−17030FA	636	コネジ Screw	5	1B670−016−4 1B670−019−4 1B670−020−8 1B670−021−8	1 10	○△	FM2
B1−17030FB	673	コネジ Screw	1	1B670−020−8 1B670−021−8	9	○△	FM2
B1−17040FA	620	コネジ Screw	1		8	○	FM2
B1−20025FA	622	コネジ Screw	1		12	○	FM2
B1−20040FE	625	コネジ Screw	1		12	○	FM2
B1−20045FB	627	コネジ Screw	2		11	○	FM2
B1−20050FA	626	コネジ Screw	2		18	○	FM2
B2−20045FA	629	コネジ Screw	1		12	○	FM2
B1−14020FB	614	コネジ Screw	2		8	○	FM2
A2−20035FB	638	コネジ Screw	1		11	○	
H1−14025FB	666	タップタクトネジ Screw	1		1	○	

部 品 表 Parts list

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部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
H1−20028FB	635	タップタイトネジ Screw	2		8	○	FM2
K2−14015FA	631	トメネジ Screw	3		4	○	FM2
K2−14025FB	613	トメネジ Screw	2	1B100−140	8	○△	
P1−10080SX	573	ヘイコウピン Pin	1		6	○	FM2

部 品 表 Parts list

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部品番号 Part No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs. per Unit	部組品番号 Assembly	参照図番 Figure	販売区分 Term of Delivery	備考 Remarks
1G104-017	G 4	接眼レンズ Eyepiece lens	1	1B100-139		△	FM2
1G125-001	G10	レンズ Lens	1	1 1B100 140	8	○△	35FB G 10
1G200-002	G 9	レンズ Lens	1	1B100 189 1B100-148		△	
1G247-016	G 5	接眼レンズ Eyepiece lens	1	1B100-139		△	FM2
1G308-001	G 8	集光レンズ Condeisor lens	2	1B100-139		△	FM2
1G415-002	G 3	プリズム Pentagonal prism	1		8	○	FM2
1G550-008-1	G 6	反射ミラー ADR mirror	2	1B100-140	8	○△	FM2
1G551-004-1	G 1	ミラー Mirror	1	1B100-138	9	○△	FM2
1G710-003	G 7	接眼ガラス Eyepiece glass	1	1B670-016 1B670 019		△	FM2
1G950-004	G 2	フレネル Focusing screen	1		8	○	

部組品番号 Assembly No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs.per Unit	構成部品番品 Constituent Parts	参照図番 Figure	備考 Remarks
1B001-085	B011	耳環 Eyelet	2	1K100-034×2, 1K044-001-1×2,	11	FM2
1B001-086	B017	圧板 Pressure	1	1K240-049, 1K370-192×2, 1K600-087,	13	FM2
1B001-091-3	B103	MD sw 基板 MD switch circuit board	1	1K115-193×2, 1K115-194 1K230-025-1, 1K240-051 1K240-052, 1K314-055-1 1K370-200-1, 1K610-175-1 1K680-104, 1S810-059	12	FM2
1B001-092	B106	外部接点 ND external contact	1	1K600-093, 1K620-021×4, 1K680-101,	12	FM2
1B001-098-2	B303	着脱釦 Lous release button	1	1K060-003, 1K208-009 1K050-108, 1K220-041, 1K370-241-1 1K370-242, 1K600-104-1	9	FM2
1B001-099-2	B306	スクリーン枠 Focusing seveen frame		1K240-068×2, 1K370-244-1×4, 1K620-032-1,	9	FM2
1B001-128-3	B2207	スプール上ギヤ Spool top gear	1	1K078-007×16, 1K260-055-1, 1K220-064 1K600-151, 1K640-362 1K630-083, 1K630-113	4	FM2
1B001-132-2	B2203	スプール軸 Spool shaft	1	1K370-368-2, 1K230-044-1,	3, 4	FM2
1B001-262	B100	シャッター Shutter	1		11	
1B001-263-1	B307	軸基板 Mirror axle bace unit		1K115-481, 1K370-203-1 1K370-247-1, 1K610-409	9	
1B001-265	B323	遮光板 Light battle plate		1K115-460, 1K115-461 1K115-462, 1K370-483 1K370-485, 1K610-379	9	

部組品番号 Assembly No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs.per Unit	構成部品番品 Constituent Parts	参照図番 Figure	備考 Remarks
1B001-267FA1	B601FA1	ASA基板本体 ASA dial unit	1	1K115-494, 1K240-209 1K240-210, 1K680-253	6	
1B001-268	B604	ASA ブラシ ASA contact brush	1	1K240-198, 1K240-199 1K340-056,	6	
1B001-270-1	B406	上地 Sw Film-advance lever switch	1	1K240-238-1, 1K610-437,	2	
1B001-313-1	B403	下地板 Unit, film advance mechanism	1	1K050-072, 1K078-007×24, 1K120-054, 1K230-041 1K260-118, 1K260-053 1K260-117, 1K310-019 1K314-069, 1K340-023 1K370-224, 1K370-225 1K370-601, 1K610-273-1 1K610-278, 1K625-027-1 1K640-355, 1K640-356 1K610-187,	3	
1B001-271	B500	管制部 Shutter control unit	1	1B201-013, 1B208-008 1K008-007, 1K050-146 1K470-028, 1K120-139	5	
1B060-122-1	B105	電池ケース Battery chamber		1K240-050-1, 1K370-521 1K370-197-1, 1K610-174 1K680-103-1, 1S810-292 1S810-298,	11	
1B060-088-2	B311	スイッチ接片 Switch contact	1	1K115-507, 1K240-056-1 1K240-057-2, 1K240-211 1K240-212, 1K680-255-1 1K600-236-1, 1S810-273 1S810-286-1,	6	

部組品番号 Assembly No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs.per Unit	構成部品番品 Constituent Parts	参照図番 Figure	備考 Remarks
1B060-089-2	B322	横基板 Mirror box mechanism	1	1B250-002-1, 1B314-053-2 1B314-054-2, 1K050-050 1K050-020, 1K050-024 1K060-003, 1K060-004 1K115-196, 1K115-480 1K120-029-1, 1K120-052 1K225-043-2, 1K225-044-2 1K230-029-1, 1K230-030-1 1K230-032, 1K230-033-1 1K230-034, 1K260-008-4 1K260-010-2, 1K260-011-1 1K314-059, 1K314-060 1K314-062, 1K314-063 1K314-064-1, 1K314-065 1K366-012, 1K366-013-1 1K370-210, 1K370-211 1K370-212, 1K370-213 1K370-214-1, 1K370-215 1K370-216, 1K370-220 1K370-245, 1K370-246 1K600-096-1, 1K610-192-2 1K640-191, 1K680-106 B1-17025FA,	10	1K115-480のみFM2と異る
1B060-090	B325	メモリーロック sw Memory lock switch	1	1K240-202, 1K240-203 1K680-246, 1S810-287	9	
1B060-091-1	B326	5-50 基板 5-50 base plate	1	1S322-017, 1S810-276-1 1S810-277-1,	7	
1B060-092	B327	PD 基板 PD base plate	1	1K680-241, 1S250-007 1S810-274, 1S810-275	9	
1B060-093-1	B703	補正 LED LED	1	1K083-030-1, 1K580-006-1 1S260-010,	8	
1B060-095	B409	カウンター sw Counter switch	1	1K240-213, 1K680-256 1K680-267, 1S810-290	2	

部組品番号 Assembly No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs.per Unit	構成部品番品 Constituent Parts	参照図番 Figure	備考 Remarks
1B060-096-6	B408	上地板 Unit, film - advance lever	1	1B060-095, 1B001-270-1 1B206-004-1, 1K050-058 1K120-122, 1K123-051 1K130-152-1, 1K146-017-1 1K150-008, 1K230-114 1K230-077, 1K230-108 1K260-050-1, 1K260-078 1K275-026, 1K314-080 1K314-105, 1K314-106-1 1K340-026, 1K340-040-1 1K370-371, 1K370-469-1 1K370-519-1, 1K370-520-1 1K475-158-1, 1K840-005 1K610-267-2, 1K610-270 1K610-275, 1K610-277-1 1K610-413-3, 1K640-253 1K680-169-2, 1S705-028 1S810-060, 1S810-289	2	
1B060-097-1	B603	ASA ダイアル部（白） ASA dial unit (chrome)	1	1B060-097FA1, 1K120-028×2, 1K123-059×2 1K246-016, 1K340-054 1K370-479, 1K470-015 1K845-050, 1K600-226	6	
1B060-097FA1	B603FA1	ASA クリック板 ASA click plate	1	1K240-197, 1S705-021,	6	
1B060-098-4	B605	ASA 基板部（白） Unit, ASA dial circuit (chrom)	1	1B001-267FA1, 1B060-097, 1B001-268 1K115-495, 1K120-028×3 1K240-196-1, 1K340-055 1K370-487, 1K610-411 1K610-253,	6	
1B060-099-1	B603	ASA ダイヤル部（黒） ASA dial unit (black)		1B060-097FA1, 1K120-028×2, 1K123-059×2 1K246-016, 1K340-054 1K370-479, 1K470-015 1K485-055, 1K600-226		
1B060-100-4	B605	ASA 基板部（黒） Unit, ASA dial circuit (black)		1B001-267FA1, 1B060-099, 1B001-268 1K115-495, 1K120-028×3 1K240-196, 1K340-055 1K370-487, 1K610-411 1K610-253,		

部組品番号 Assembly No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs.per Unit	構成部品番品 Constituent Parts	参照図番 Figure	備考 Remarks
1B100-138-1	B310	チリトリ Mirror holder	1	1K115-220-3, 1K115-391-1 1K240-054, 1K240-055 1K370-204×4, 1K370-217×2 1K370-499, 1K600-094-1×2, 1K610-177, 1G551-004-1	9	
1B100-139-2	B702	接眼モールドメガネ Eyeplece mold	1	1K010-018×4, 1K240-069 1K240-070, 1K240-194 1K240-195, 1K576-027×2 1K610-205×2, 1K610-206 1K680-113-2, 1G104-017 1G247-016, 1G308-001×2	8	
1B100-140	B701	ミラー保持基板 Mirror retaining base plate		1K050-123～126, 1K048-034, 1K240-190 1K240-192, 1K610-407 A1-14020FD, K2-14025FB×2, 1G125-001, 1G550-008-1×2,	8	
1B100-148	B314	エプロン（黒） Apron (black)	1	1K080-018, 1K240-191 1G200-002,		
1B100-189	B314	エプロン（白） Apron (chrome)	1	1K080-017, 1K240-191 1G200-002,	7	
1B201-013	B501	シャッターダイヤル環 Shutter dial unit	1	1K470-023, 1K640-321 1K640-322,	5	
1B206-002-1	B305	絞り込みレバー Stop－down lever	1	1K610-178-1,	9	
1B206-003-1	B324	セルフレバー Self－timer lever	1	1K625-006,	8	FM2
* 1B206-004-1 (1B206-004)	B407	巻上レバー Film－advance lever	1	1K010-019×2, 1K206-001 1K610-185-1, 1K680-110	2	FM2
1B208-008	B502	Auto ロックボタン Auto lock bottan	1	1K208-031, 1K610-438,	5	
1B240-003	B023	接点モールド Contact mold	1	1K240-047,	1	FM2

部組品番号 Assembly No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs.per Unit	構成部品番品 Constituent Parts	参照図番 Figure	備考 Remarks
1B260-002-1	B319	平歯車 Gear	1	1K260-009-1, 1K640-192,	10	FM2
1B300-007-6	B206A	セットカム A Set cam A	0～1	1K625-008-4, 1K370-227 1K630-087, 1K600-101-2	4	FM2
1B300-008-7	B206B	セットカム B Set cam B	0～1	1K625-008-1, 1K370-227 1K630-087, 1K600-102-3	4	FM2
1B300-009-7	B206C	セットカム C Set cam C	0～1	1K625-009-5, 1K370-227 1K630-087, 1K600-102-3	4	FM2
1B300-010-8	B206D	セットカム D Set cam D	0～1	1K625-009-5, 1K370-227 1K630-087, 1K600-102-3	4	FM2
1B310-031	B029	開閉ロックレバー Rewind knob lock lever	1	1K225-045, 1K310-038,	7	35FB
1B314-049	B027	巻戻レバー Rewind crank	1	1K201-014, 1K370-240 1K625-010,	6	FM2
1B314-051-2	B104	チャージレバー Shutte charge lever	1	1K314-054-1, 1K340-019-1 1K370-198, 1K370-199-1	4	FM2
1B314-053-2	B320	ミラーアップレバー Mirror-up lever	1	1K115-195, 1K314-061-1 1K366-011-1, 1K370-208 1K370-218,	10	FM2
1B314-054-3	B321	3,1レバー Aperture lever	1	1K314-058-2, 1K370-207-2 1K370-209,	10	FM2
1B314-056-7	B2101	レリーズ板 Release plate	1	1K240-048-1, 1K314-104-4 1K366-010, 1K600-086 1K680-097-2,	11	FM2
1B314-080	B304	手動絞りレバー Manual stop-down lever	1	1K156-024, 1K314-057-1,	9	
1B314-081	B312	セルフレバー軸 Self-timer lever axle	1	1K314-141, 1K370-195,	8	
1B314-082	B313	シーソーレバー See-saw lever	1	1K314-143, 1K370-489,	9	

部組品一覧表　Assembly List

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部組品番号 Assembly No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs.per Unit	構成部品番品 Constituent Parts	参照図番 Figure	備考 Remarks
1B340-001-2	B204	スプール軸受 Spool shaft bearing case	1	1K078-007×8, 1K640-196 1K640-201-1, 1K640-202	4	FM2
1B400-001-2	B012	シンクロターミナル Sync terminal	1		11	FM2
1B467-007-2	B030	電池キャップ Battery chamber lid	1	1K467-017-2, 1K630-082,	12	FM2
1B485-010	B031	ダイヤル受座 Ring, ASA dial maunting	1	1K087-055, 1K680-254,	6	
1B620-008-4	B019	底ぶた（白） Bottomcover (chrome)	1	1K060-005-1, 1K370-189, 1K620-019 1K640-187, 1K640-188	12	FM2
1B620-010-1	B019	底ぶた（黒） Bottomcover (black)		1K060-005-1, 1K370-189, 1K620-035 1K640-187, 1K640-188,		
1B620-014-5	B2016	裏ぶた Camera back	1	1K115-154, 1K115-155 1K115-156, 1K115-157×2 1K115-301, 1K123-034 1K220-031, 1K240-033-1 1K362-007-1, 1K362-014 1K370-176-1, 1K370-177×2 1K370-179-1×2, 1K370-181×3, 1K370-193×4 1K600-079, 1K610-163 1K610-168, 1K610-280 1K620-046-3, 1K680-098-1	13	FM2
1B630-009	B2202	スプール Spool	1	1K630-115, 1K630-116 1K640-256,	4	FM2
1B640-018	B315	連動環, B Aperture coupling ring B	1	1K240-090-1, 1K640-293,	7	

(10-1) FPC DISASSEMBLING

Lead wires to be unsoldered

FPC tongue to Warning LED ①

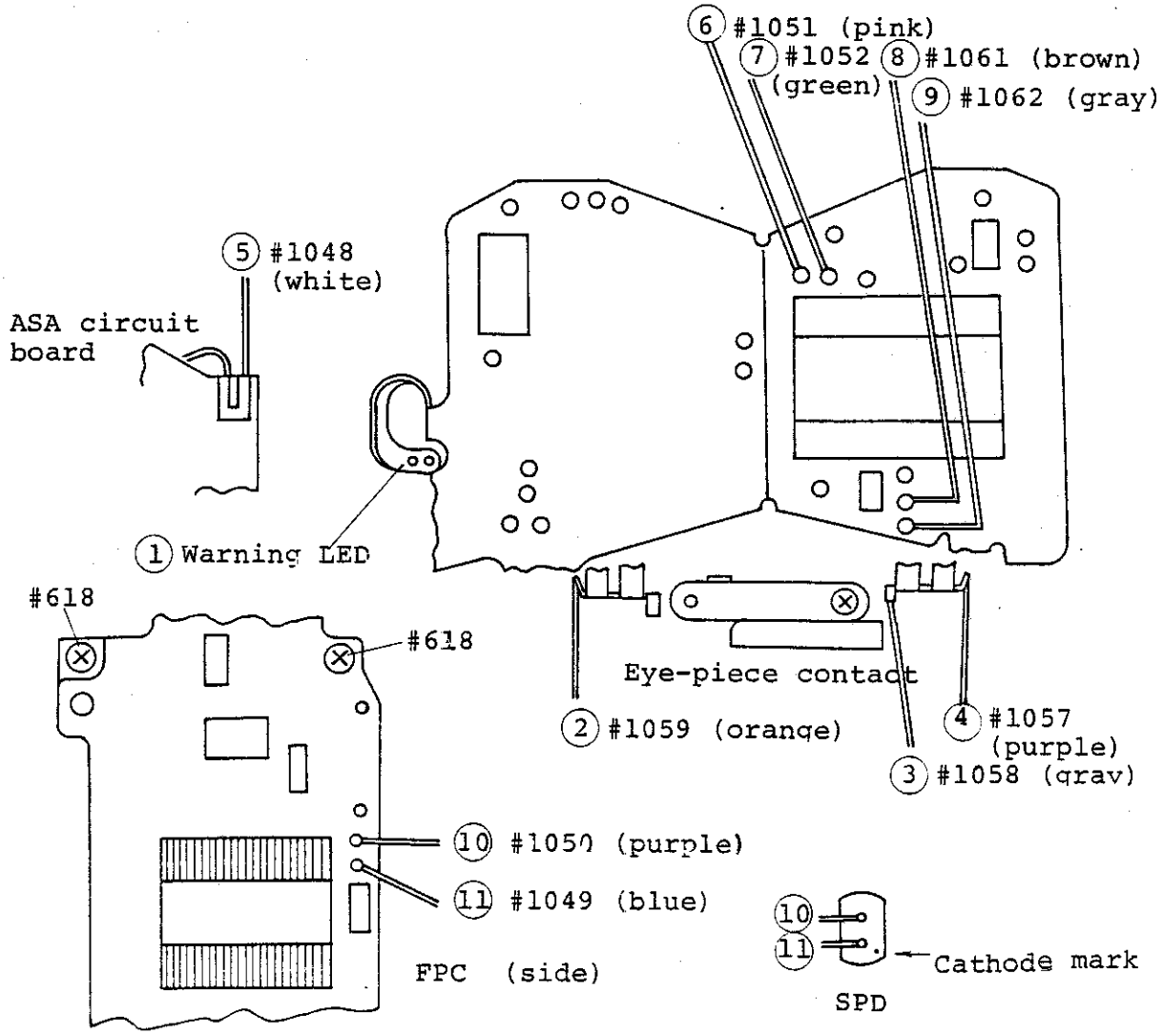
Tool: Vacuum solder cleaner

Eye-piece contact
- ② #1059 (orange)
- ③ #1058 (gray)
- ④ #1057 (purple)

FPC (upper)
- ⑥ #1051 (pink) → F-FO base plate
- ⑦ #1052 (green) → F-FO base plate
- ⑧ #1061 (brown) → mirror switch
- ⑨ #1062 (gray) → mirror switch

ASA circuit board
- ⑤ #1048 (white) DB switch

FPC (side)
- ⑩ #1050 (purple) → TTL SPD
- ⑪ #1049 (blue) → TTL SPD



部組品番号 Assembly No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs.per Unit	構成部品番品 Constituent Parts	参照図番 Figure	備考 Remarks
1B670-016-4	B026	上 蓋 (白) Top cover (chrome)	1	1K030-001, 1K040-001-1 1K115-180, 1K115-233 1K115-477, 1K160-180 1K160-181, 1K160-182 1K206-002, 1K220-036-1 1K233-014, 1K240-118-2 1K240-046-1, 1K360-007 1K370-363-1, 1K400-076-1 1K400-077-1, 1K400-079-1 1K406-014, 1K620-065 1K625-007-2, 1K630-080 1K400-190, 1K640-363 B1-17030FA, 1G710-003 1S007-032, 1B240-003 1B680-012-1	1	
1B670-019-4	B026-4	上 蓋 (黒) Top cover (black)	1	1K030-001, 1K040-001-1 1K115-180, 1K115-233 1K115-477, 1K160-180 1K160-181, 1K160-182 1K206-002, 1K220-036-1 1K233-014, 1K240-215 1K240-046-1, 1K360-007 1K370-363-1, 1K400-076 1K400-077-1, 1K400-082 1K406-014, 1K620-069 1K625-007-2, 1K630-080 1K640-190, 1K640-363 B1-17030FA, 1G710-003 1S007-032, 1B240-003 1B680-012		

部組品番号 Assembly No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs.per Unit	構成部品番品 Constituent Parts	参照図番 Figure	備考 Remarks
				1B001-098-1, 1B001-099-2		
				1B001-263, 1B001-265		
				1B060-088-2, 1B060-089-3		
				1B060-090, 1B060-091		
				1B060-092, 1B100-138-1		
				1B100-189, 1B206-002-1		
				1B206-003, 1B314-080		
				1B314-081, 1B314-082		
				1B640-018, 1K050-019		
				1K050-022		
				1K050-029～1K050-048		
				1K050-112, 1K115-187		
				1K115-191, 1K115-203		
				1K115-233×2, 1K120-051		
				1K120-092, 1K123-038	7	
1B670-020-8	B328-2	前板(白) Front plate unit (chrome)	1	1K123-037, 1K123-042×2	8	
				1K126-017, 1K130-053	9	
				1K130-058, 1K136-015	10	
				1K146-035, 1K220-042		
				1K225-075, 1K230-028		
				1K230-031-2, 1K230-035		
				1K240-065-1, 1K240-156		
				1K314-142, 1K370-567		
				1K404-030, 1K610-170		
				1K610-408, 1K620-066		
				1K630-090, 1K640-298		
				1K670-024, A1-17015FB		
				A1-17018FB×2		
				A2-17025FB, B1-17022FB		
				B1-17025FB×5		
				B1-17030FB, B1-17030FA		

部組品番号 Assembly No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs.per Unit	構成部品番品 Constituent Parts	参照図番 Figure	備考 Remarks
1B670-021-8	B328-2	前板（黒） Front plate unit (black)	1	1B001-098-1, 1B001-099-2 1B001-263, 1B001-265 1B060-088, 1B060-089 1B060-090, 1B060-091 1B060-092, 1B100-138 1B100-148, 1B206-002-1 1B206-003, 1B314-080 1B314-081, 1B314-082 1B640-018, 1K050-019 1K050-022, 1K050-029～1K050-048 1K050-112, 1K115-187 1K115-191, 1K115-203 1K115-233×2, 1K120-051 1K120-057, 1K120-064 1K123-038, 1K123-039 1K123-042×2, 1K126-017 1K130-053, 1K130-058 1K136-015, 1K146-035 1K220-042, 1K225-075 1K230-028, 1K230-031-2 1K230-035, 1K240-065-1 1K240-156, 1K314-142 1K370-567, 1K404-030 1K600-099-1, 1K610-170 1K610-408, 1K620-066 1K630-090, 1K640-298 1K670-024, A1-17015FB A1-17018FB×2, A2-17025FB, B1-17022FB B1-17025FB×5, B1-17030FB, B1-17030FB		

部組品一覧表　Assembly List

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部組品番号 Assembly No.	補助番号 Ckt. No.	名称 Name	1台分個数 Pcs.per Unit	構成部品番品 Constituent Parts	参照図番 Figure	備考 Remarks
1B680-012	B022-1	シュー座モールド Shoe mount mold	1	1K370-191×2, 1K370-482 1K380-014	1	
1S007-030-4	B1001	I. C プリント板 I.C. circuit board	1	1S118-001, 1S130-009 1S130-010, 1S210-006 1S237-038, 1S250-003 1S310-009, 1S310-012 1S310-015, 1S310-020 1S310-022, 1S310-024 1S310-031, 1S310-034 1S322-018, 1S322-019 1S335-006, 1S335-008 1S335-009, 1S335-011 1S335-028, 1S340-030 1S340-031, 1S382-003 1S705-022, 1S810-330 1S810-331, 1S340-025	8	
1S007-032-1	B1003	レディライトP板 Circuit board ready-light	1	1S260-005, 1S705-023	1	

(11) MIRROR BOX MECHANISM, MIRROR HOLDER Fig. 9

Mirror box mechanism B322 (Fig. 10)

⊕ #618 ⊕ #636

⊕ C #609

Remove B322 with depressing Manual stop-down lever B304 so as not to catch Light-tight #112

Mirror axle base unit B307

⊕ #616 x 2

Mirror holder B310

Washer #375

Focusing screen frame B306

Light baffle plate B323

Mirror switch B311

⊕ #639 x 2

Manual stop-down lever B304

Spring, manual stop-down lever #313

(12) APRON, F-FO BASE PLATE Fig. 7

Bayonet #202
Bayonet spring #208

⊕ #647 x 4

Apron B314
Aperture coupling ring B315
Ring, bayonet #219-1
Spring #207

Avoid separation of B315 from B314.

⊕ #649

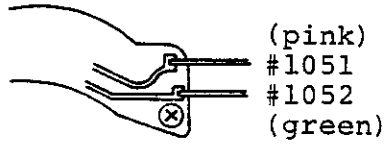
F-FO base plate B326

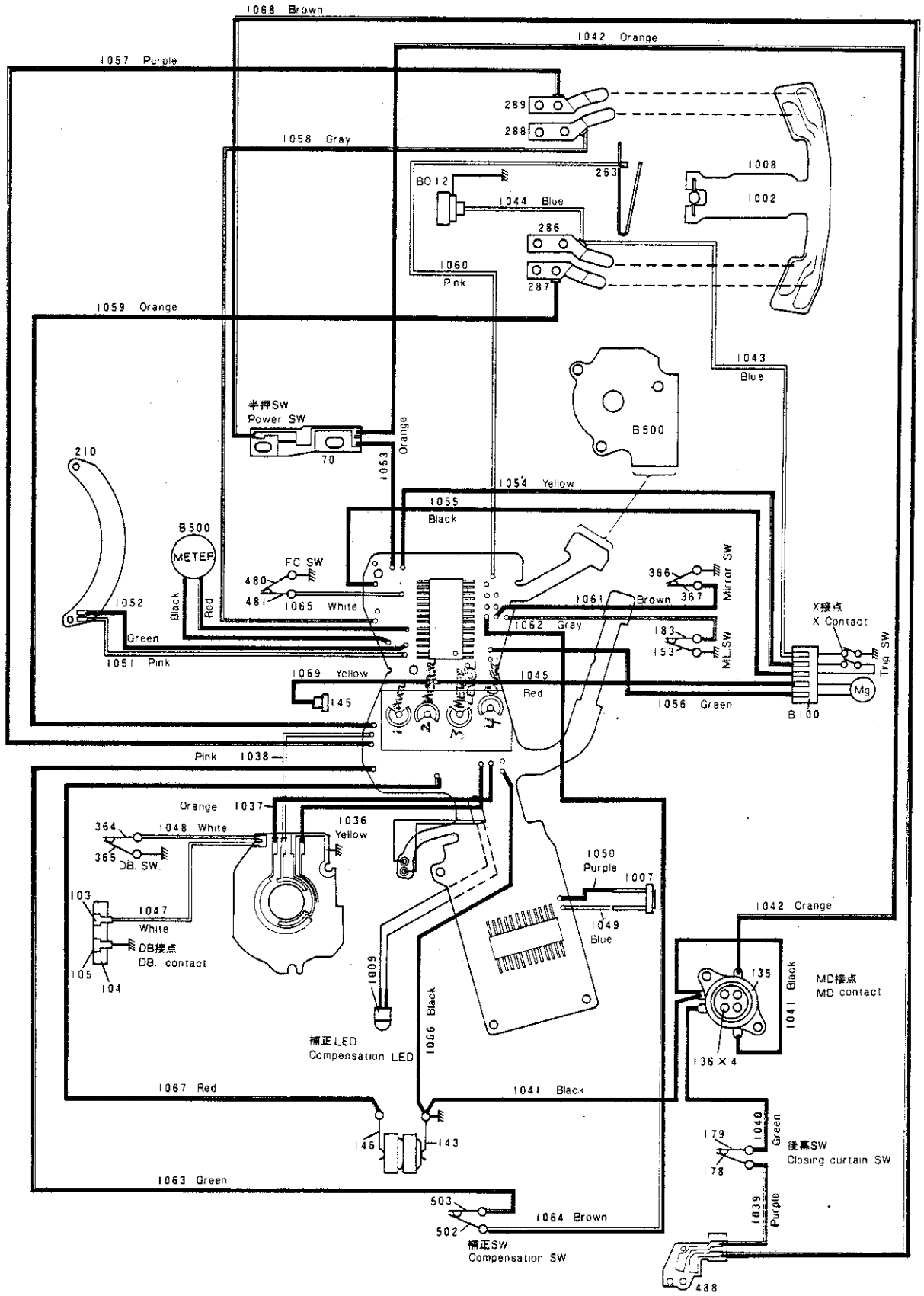
Unsolder Lead wires

#1051 (pink) and
#1052 (green)

⊕ #618 x 2

F-FO base plate




1068 Brown
1042 Orange
1057 Purple
289
288
1058 Gray
253
1008
1002
B012
1044 Blue
286
1060
Pink
287
1059 Orange
1043
Blue
半押SW
Power SW
70
1053
Orange
B500
210
1054 Yellow
1055
Black
B500
METER
FC SW
480
481
1065 White
366
Mirror SW
367
1061
Brown
1062 Gray
183
153
M1.SW
X接点
X Contact
Trig. SW
1052
Green
Black
Red
1051 Pink
1069 Yellow
145
1045
Red
1056 Green
Mg
B100
Pink 1038
Orange 1037
364
1048 White
365
DB. SW.
1036
Yellow
1050
Purple
1007
1049
Blue
103
1047
White
DB接点
DB. contact
105
104
1009
1066 Black
補正LED
Compensation LED
1042 Orange
135
1041 Black
MD接点
MD contact
136×4
1067 Red
1041 Black
146
143
179
1040
Green
後幕SW
Closing curtain SW
178
1063 Green
503
502
1064 Brown
補正SW
Compensation SW
1039
Purple
488

(12) FPC INSTALLATION

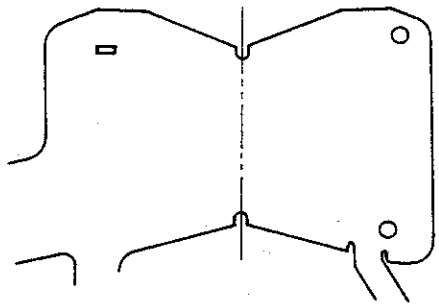
It is necessary to attach Plate #230 and Spring #231 to a new FPC B1001 before installing.

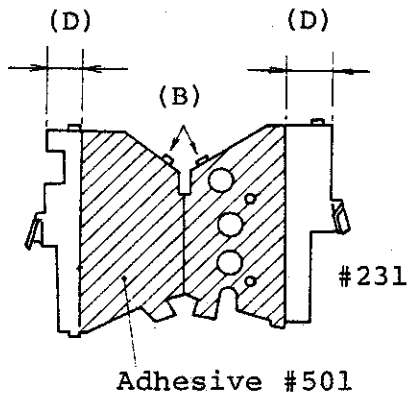
1. Plate #230 and Spring #231

   a. Crease the center of FPC gently as shown in the figure below.

   b. Apply Adhesive #501 to Spring #231 overall except the side sections (D) in the figure below.

   c. Fit the three protrusions of #231 into the holes of FPC and then slide the FPC against the protrusions (B) of #231. Give a pressure to make sure of adhesion.





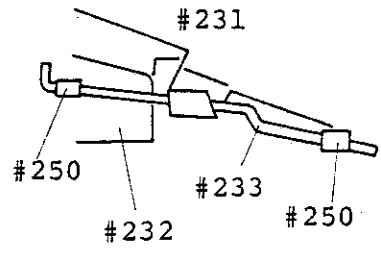
   d. Apply #501 to surface of #230 overall and attach #230 to FPC.

2. FPC INSTALLATION

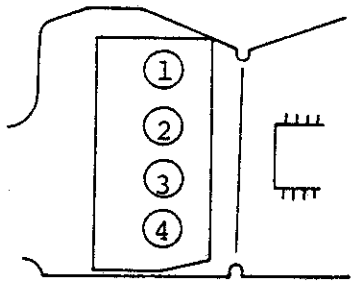
   a. Engage two Prism retainer springs #233 in place to secure Spring #231 with Prism box #250.

   b. Tighten Screws ⊕ #618 x 2.

   c. Solder the lead wires as shown in the figures on p. A11 and A13.



3) SHUTTER SPEED ACCURACY ADJUSTMENTS



1 VR1: Meter ∂ (↻: slow)

2 VR2: TTL stop signal (↻: short)

3 VR3: Meter level (↻: high)

4 VR4: Auto level (↻: slow)

1) Adjustments should be done in the order:

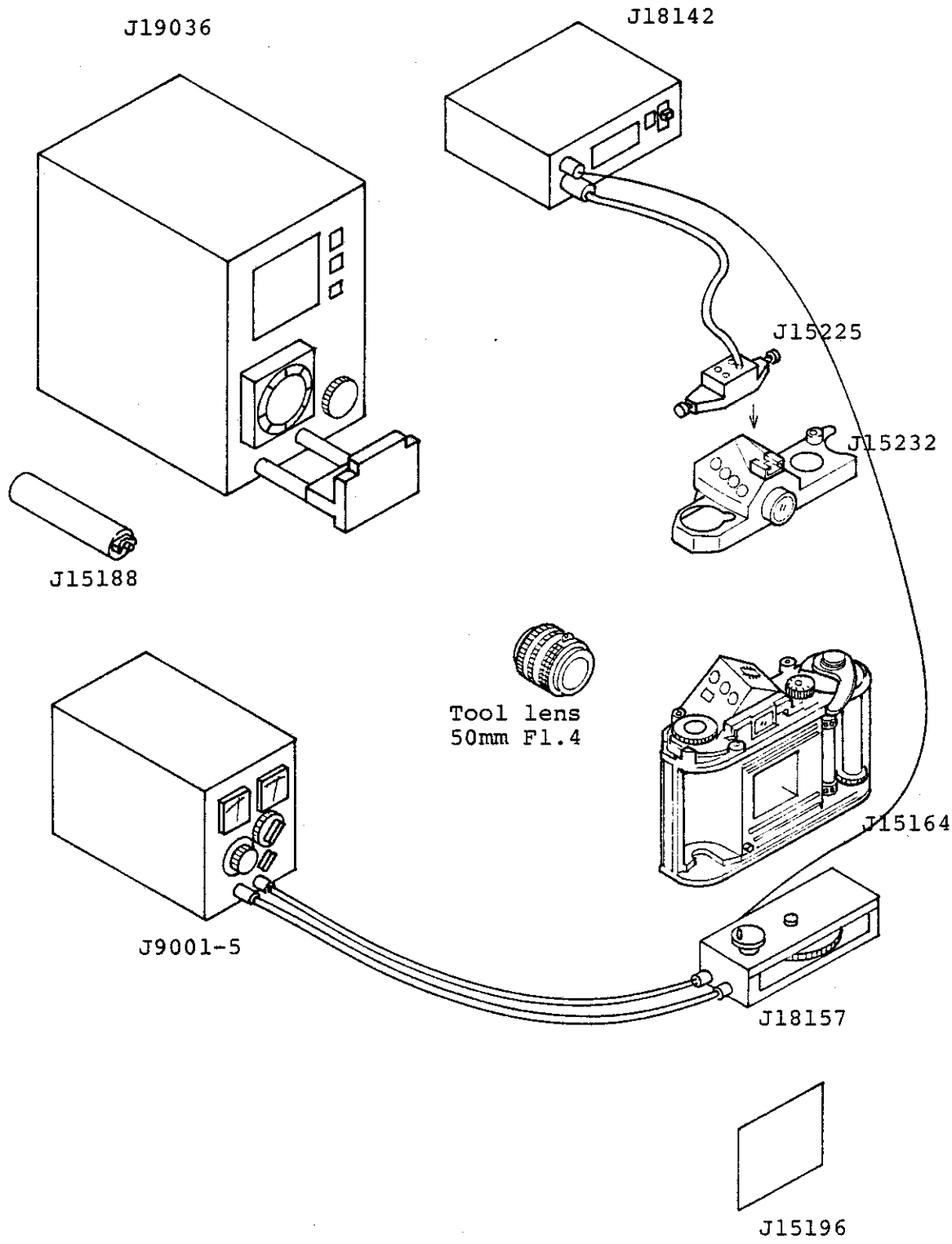
Auto level → Meter level → Meter ∂ → Shutter check TTL stop signal.

2) Meter level is relative to meter ∂ and the shift of one level effects that of the other level.

3) TTL stop signal measurement should be referred to the figure on p. A16 and the repair manual for the Nikon FG.

	Item	ASA	F No.	LV	Meter Needle	Shutter Speed
1	Auto level (VR 4)	25	16	15	1/30 sec.	
		800	2.8	9	1/500 sec.	
	Memory lock ON	100		9 → 15	Locking allowance: 1/60 sec.	(2.5ms)
2	Meter level (VR 3)	100	5.6	6	1/2 sec.	
	Meter ∂ (VR 1)			↓↑ 15	1/1000 sec.	
	Meter needle			9	1/15 sec.	
3	Shutter speed	50	1.4	15		4.1 - 5.2 ms
	Shutter curtains open					
	TTL stop signal (VR 2)					200 ± 25 μs

(13-1) TTL STOP SIGNAL MEASUREMENT SET-UP



[1] ELECTRIC CIRCUIT

Contents

		Page
CIRCUITRY OUTLINES	.....	C1
1. Frame Counter Switch	.....	C2
2. Meter Switch/Bias Signal		
3. Mirror Switch		
4. Memory Lock Switch		
5. Oscillation Circuit		
6. Gray Code	.....	C3
7. Exposure Measurement	.....	C4
8. ASA	.....	C4
9. Exposure Computation	....	C5
10. Aperture Value	.....	C6
11. Meter	.....	C7
12. Shutter Control On A Mode	.....	C8
13. Shutter Control On M Mode	.....	C9
14. Battery Check	.....	C10
15. Exposure Compensation	.....	C11
16. TTL Flash Output Control	.....	C12

CIRCUITRY OUTLINES

Abbreviations

Checking lands

A1 - A28	Pin of IC A
B1 - B24	Pin of IC B
E1 - E18	Located at the IC B side of FPC
F1 - F14	Located at the left-side of FPC
G1 - G16	Located on the resistor block of FPC
H1 - H31	Located at the IC A side of FPC

Independent parts:

P1 - P23	Parts installed on FPC

Variable resistors:

VR1 - VR4	Variable resistors on the resistor block

Refer the locations of the checking lands and independent parts to p. E4 - E5.

TR1 - TR5: Variable resistors adjusted to fit for individual FPCs

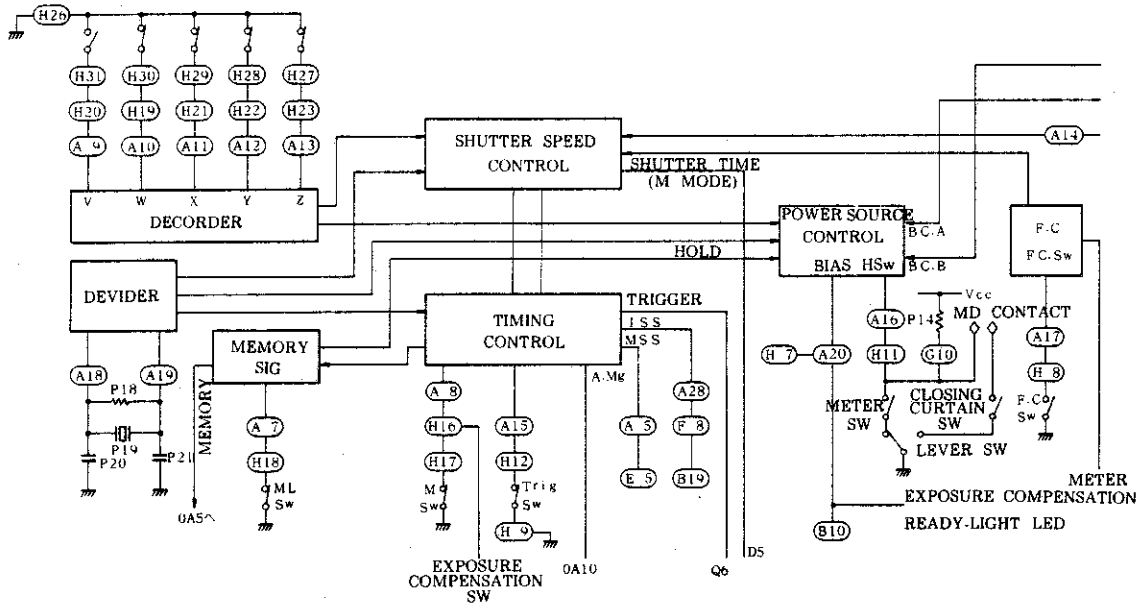
R2 - R4 : Printing resistors on the resistor block

OA1 - OA12: Amplifiers or comparators (marked "+,-") inside the ICs

D1 - D5 : Digital timers inside the ICs

R11 - R19: Resistors inside the ICs

BLOCK DIAGRAM OF METER SWITCH



1. FRAME COUNTER SWITCH (FC SW)

FRAME COUNTER	S - 0	1 -
FC SW	ON	OFF
SHUTTER SPEEDS DELIVERY ON A MODE	1/250	NORMAL
SHUTTER SPEEDS DELIVERY ON M MODE	NORMAL	
METER NEEDLE	STOP	NORMAL

While FC SW is closed, the signal remains low from FC block to METER block. METER block will not be in operation.

Reference voltage:

FC SW ON – 0V
FC SW OFF – APPROX. 0.75V

Checking land:

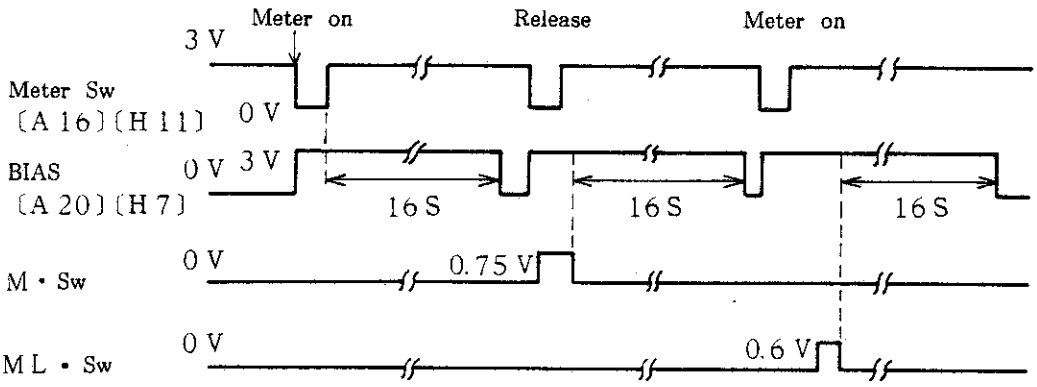
[A17] [H8]

2. METER SWITCH / BIAS SIGNAL

LEVER SW is in contact with METER SW when the film-advance lever is pulled out to the stand-off position (LEVER SW is in contact with CLOSING CURTAIN SW when the film-advance lever is retracted).

Depressing the release button halfway turns METER SW on to make BIAS SIGNAL high. As long as BIAS SIGNAL is held high, the whole circuit is in operation. Turning METER SW off starts timing of 16 sec. hold. After 16 seconds, BIAS SIGNAL goes low and thus the whole circuit turns off.

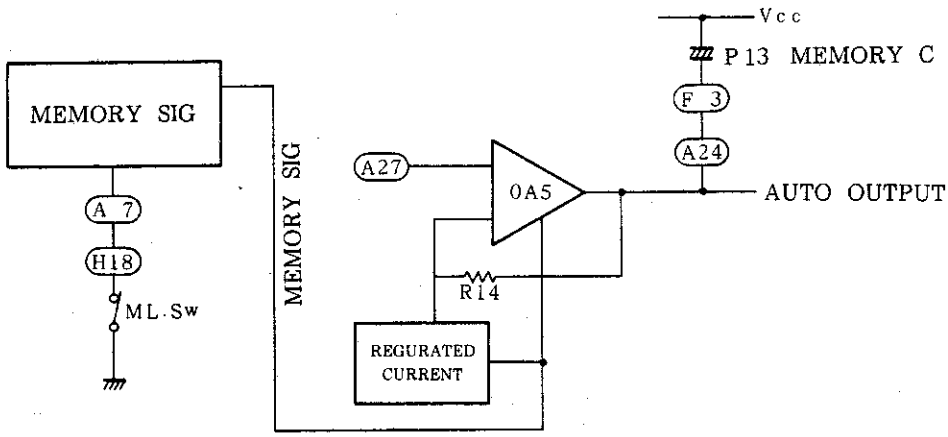
Note that timing of 16 sec. hold will not start before M SW turns off or ML SW turns on.



3. Signals of M SW, TRIG SW, A MG, MSS and ISS should be referred to the timing chart of p. E33.

4. MEMORY LOCK SWITCH (ML SW)

BLOCK DIAGRAM OF MEMORY LOCK SWITCH



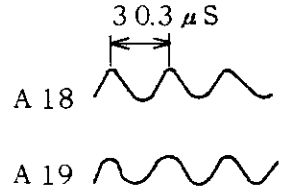
Turning ML SW off makes MEMORY SIG. low and then AMPLIFIER OA5 and CURRENT REGULATION block turn off. The level of AUTO OUTPUT will be stored at MEMORY C P13.

Releasing shutter on A mode, M SW turns off and MEMORY SIG. goes low. The level of AUTO OUTPUT to be stored at MEMORY C P13 is the level of mirror down. (See the block diagram of p. C2)

Checking land: [A7] [H18] Reference voltage: 0.6V (when ML SW is off)

5. OSCILLATION CIRCUIT

Regardless of ON/OFF of BIAS SIG, OSCILLATION CIRCUIT is in operation as long as batteries are installed. The oscillation frequency is 32.768 kHz.



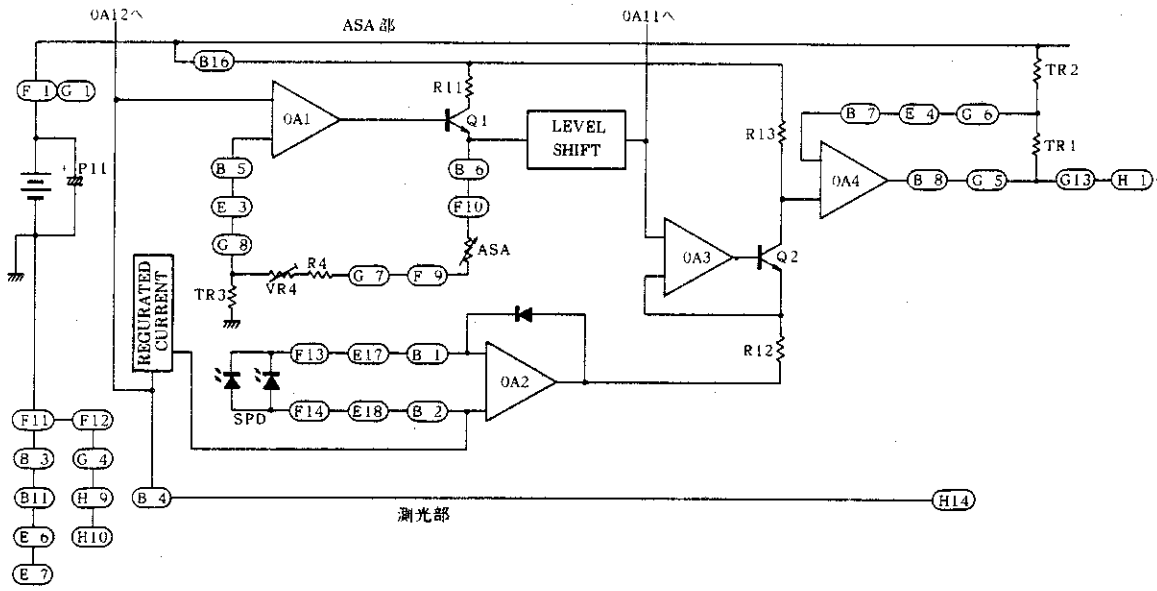
6. GRAY CODE

Refer to the gray code combination chart of p. E24 - E25.

High: Approx. 0.6V

Low : 0V

BLOCK DIAGRAM OF EXPOSURE MEASUREMENT



7. EXPOSURE MEASUREMENT

SPD generates a current flow in response to the light intensity. The amount of the current flow are converted into the level of voltage through the logarithmic compression; the output of AMPLIFIER OA2 shifts 18mV/LV. The more the current flows, the higher the voltage becomes.

Checking land: [F13] [F14]

Reference voltage: Approx. 510mV

The output of Amplifier OA2 is to be checked at LAND G6, but the ASA value is to be kept unchanged. The measurement reference is GND.

8. ASA

Resistor TR3 is used to regulate the current flow (ASA 分) to 20μA and thus the voltage of LAND F10 will shift by 18mV/AV per 0.9kΩ/AV of ASA resistance change.

Variable resistor VR4 is used to adjust the voltage (AUTO LEVEL) for the ASA resistance.

The more the ASA resistance increases, the lower the voltage of LAND F10 becomes.

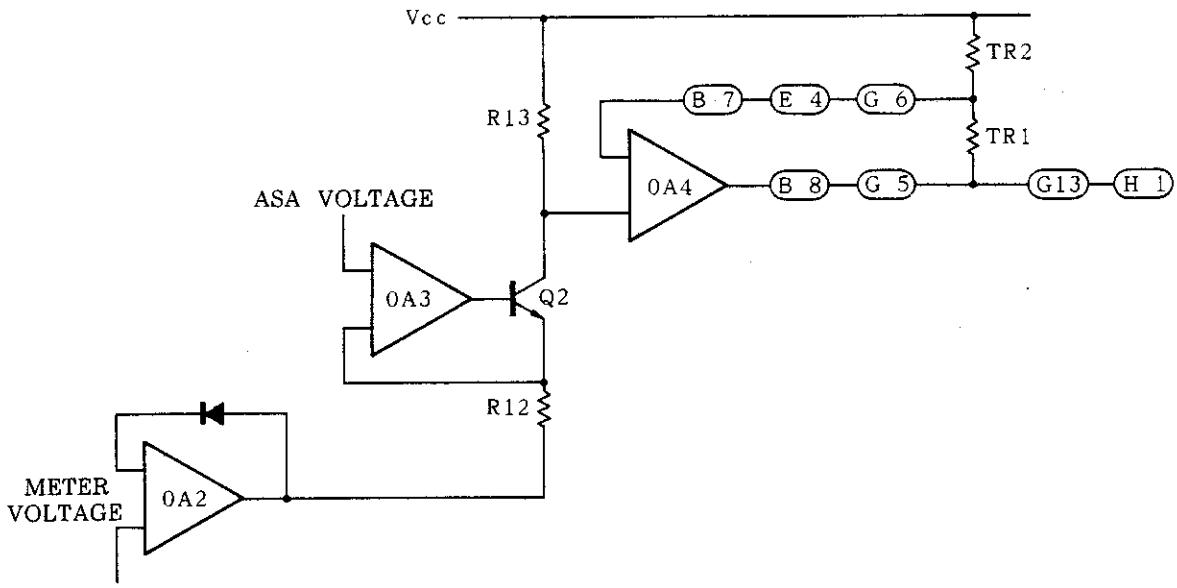
Checking land:

[G8] ASA reference voltage: Approx. 240mV

[G7] [G8] Approx. 570mV

[F10] ASA voltage: 0.6 - 0.7V

BLOCK DIAGRAM OF EXPOSURE COMPUTATION



9. EXPOSURE COMPUTATION

The output of AMPLIFIER OA4 is determined through the computation of the outputs of AMPLIFIERS OA3 (ASA VOLTAGE) and OA2 (METER VOLTAGE).

VOLTAGE OF RESISTOR R12 = ASA VOLTAGE - METER VOLTAGE

As METER VOLTAGE shifts by 18mV, the voltage of RESISTOR R12 will shift at the same rate accordingly.

VOLTAGE OF RESISTOR R13 = VOLTAGE OF RESISTOR R12

As the voltage of RESISTOR R12 shifts by 18mV, that of RESISTOR R13 will shift at the same rate.

VOLTAGE OF RESISTOR TR2 = VOLTAGE OF RESISTOR R13

VOLTAGE OF RESISTOR TR1 = VOLTAGE OF RESISTOR TR2

As the voltage of RESISTOR R13 shifts by 18mV, those of RESISTORS TR1 and TR2 will shift at the same rate.

The sum of shifting rates of RESISTORS TR1 and TR2 is the shifting rate of output of AMPLIFIER OA4; that is 36mV/EV.

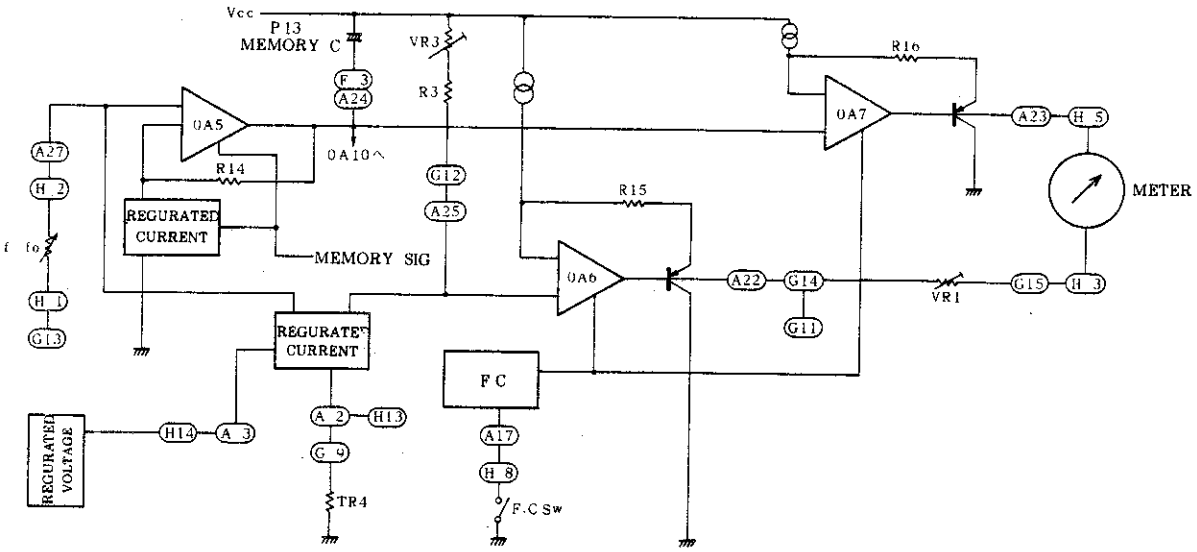
The less the light intensity is (or the less the ASA value is), the lower the voltage of Amplifier OA4 becomes.

Checking land:

[G5] [G13] Shifting rate 36mV/EV

[G6] Shifting rate 18mV/EV

BLOCK DIAGRAM OF APERTURE CHECK



10. APERTURE VALUE

In order to determine a correct shutter speed, the aperture value should be added to the output of AMPLIFIER OA4. RESISTOR F-FO checks the aperture value and prepares the output of AMPLIFIER OA5 (AUTO OUTPUT).

The voltage of RESISTOR F-FO shifts by 36mV per one F/stop value.
(The resistance value of RESISTOR F-FO shifts by 0.8kΩ /AV)

The smaller the aperture is selected, the higher the resistance value of RESISTOR F-FO is (or the lower the voltage of LAND2 goes).

ex. Maximum aperture is selected:

VOLTAGE OF LAND H1 = VOLTAGE OF LAND H2

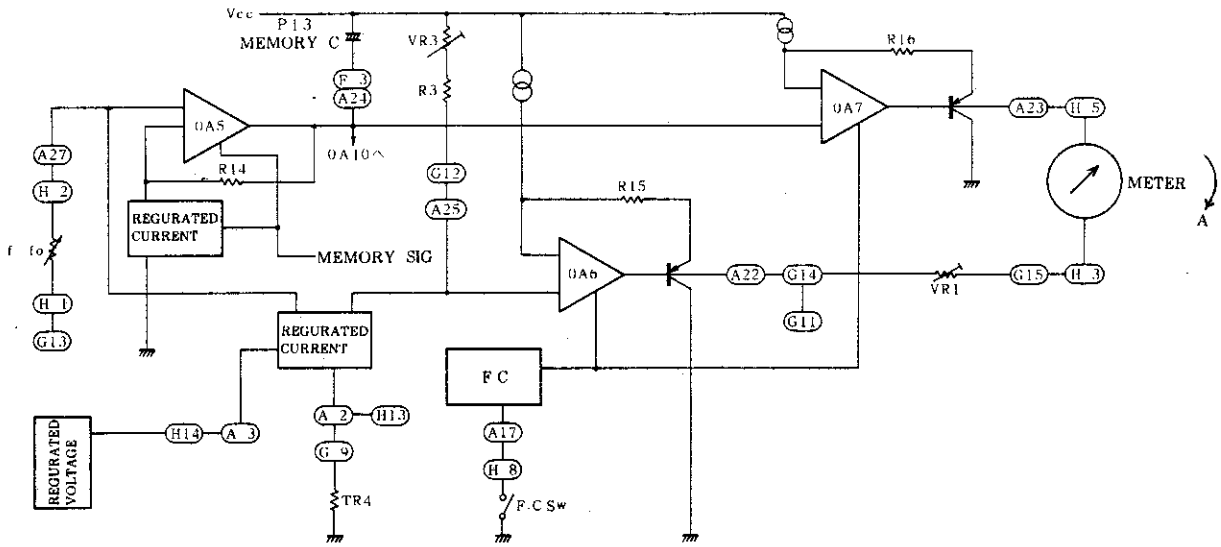
Smaller aperture is selected:

VOLTAGE OF LAND H1 > VOLTAGE OF LAND H2
(Difference of 36mV per one F/stop value)

The output voltage of AMPLIFIER OA5 is shifted higher with RESISTOR R14 for the balance of the output of TIMER CIRCUIT.

VOLTAGE OF LAND A24 = VOLTAGE OF LAND A27 +
VOLTAGE OF RESISTOR R14

BLOCK DIAGRAM OF METER



11. METER

The resistance value of VARIABLE RESISTOR VR3 determines the output of AMPLIFIER OA6. The output of AMPLIFIER OA7 is lower than the voltage of LAND A24 to fit AUTO OUTPUT for the operation of meter.

The voltage of LAND A23 is higher than that of LAND A22 and the current flows from LAND A23 to LAND A22. So, the meter needle moves. The voltage of A23 will shift by 36mV/EV and the rate is equivalent to that of AUTO OUTPUT. The higher ASA value, the more light or the larger aperture will increase the voltage of LAND A23. The voltage difference between A23 and A22 will be increased. Thus the meter needle moves to indicate higher speeds.
(The resistance value of METER : 1.2kΩ)

Until the frame counter reaches "1", FC block provides lower output to turn AMPLIFIERS OA6 and OA7 off and thus the meter needle will not move.

When shutter is released, M SW turns off and MEMORY SIG. becomes low. AUTO OUTPUT is stored in MEMORY C. The output of AMPLIFIER OA7 will not change to move METER.

VARIABLE RESISTOR VR1 determines the current flow (METER γ) per one F/stop value.

Checking land:

[G12] [A25] Approx. 2.2V (shifted by VR3)

[H5] [A23] 1.5V or more

[G14] [A22] Approx. 1.5V (shifted by VR3)

BLOCK DIAGRAM OF SHUTTER CONTROL ON A MODE

Each signal should be referred to the timing chart of p. E33.

12. SHUTTER CONTROL ON A MODE

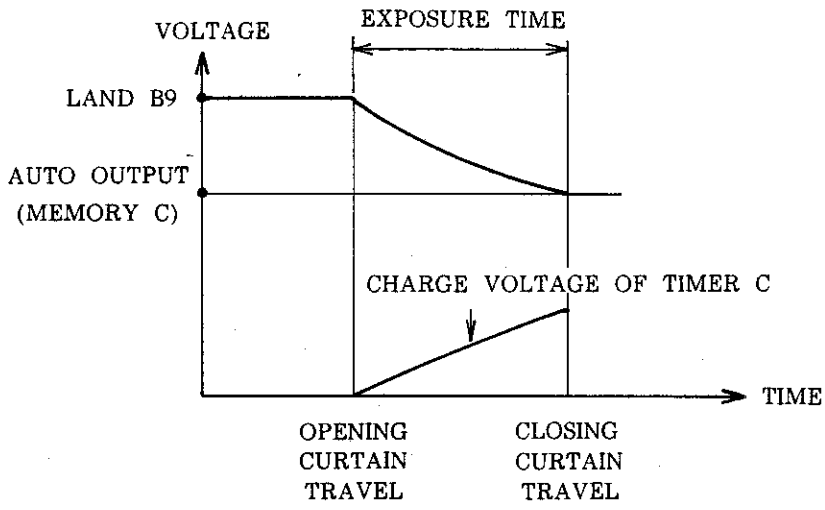
AUTO OUTPUT is provided by AMPLIFIER OA5. Shutter release turns M SW off before mirror rise and MEMORY SIGNAL goes low. Then AMPLIFIER OA5 and REGULATED CURRENT turn off, but AUTO OUTPUT will be stored at MEMORY CONDENSER P13. At the same time, the TRIGGER SIGNAL goes low to turn TRANSISTOR Q6 on and the voltage of LAND A1 will be equal to Vcc. MG SIGNAL goes high to switch COMPARATOR OA10 on. In COMPARATOR OA10 the voltage of LAND A1 (Vcc) is inputted to positive terminal (+) and the voltage of LAND 24 (AUTO OUTPUT) to negative terminal (-). As Vcc is higher than AUTO OUTPUT, the outputs of COMPARATOR OA10 is high. The outputs of DIODES D4 and D5 are high. Therefore, TRANSISTOR P23 turns on to charge CLOSING CURTAIN MG.

The current consumption is approx. 14mV (5mA for METERING + 9mA for CLOSING CURTAIN MG). The mirror rises to the taking position and the opening curtain starts to travel. TRIGGER SW turns off to make TRIGGER SIGNAL high and TRANSISTOR Q6 turns off. The charge current flows to TIMER CIRCUIT through TIMER C. The voltage of LAND A1 starts to decrease from Vcc and crosses the voltage of AUTO OUTPUT while TIMER C is being charged. At the moment, COMPARATOR OA10 reverses (Vcc $<$ AUTO OUTPUT) and the output becomes low. The output of D5, as well as that of D4, goes low to turn TRANSISTOR P23 off. Then the closing curtain starts to travel. The voltage of LAND B9 decreases by 36mV if the shutter speed slows down twice as much.

Ex. VOLTAGE OF LAND B9

VOLTAGE AT 1/1000 SEC - VOLTAGE AT 1/500 SEC = 36mV

BLOCK DIAGRAM OF SHUTTER CONTROL ON M MODE



13. SHUTTER CONTROL ON M MODE

On manual mode (when M SW is turned off), A MG SIGNAL remains low and COMPARATOR OA10 will not operate. The output of DIODE D4 is low. But MANUAL SHUTTER TIME SIGNAL becomes high and the output of DIODE D5 turns high to switch TRANSISTOR P23 on. Then the current flows to charge CLOSING CURTAIN MG.

The opening curtain travel turns TRIGGER SW off. MANUAL SHUTTER TIME SIGNAL is held high in duration of the exposure time selected. After the exposure is completed, it turns low and the closing curtain starts to travel.

Checking lands:

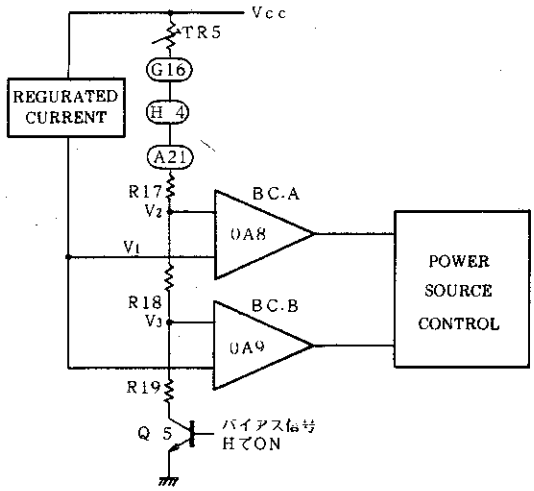
[F7] Vcc (constantly)

[H15] Vcc (at metering)
Approx. 0V (from M SW OFF until closing curtain travel)

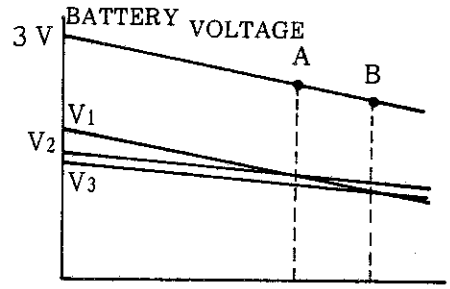
[A4] 0V (at metering)
Approx. 0.7V (from M SW OFF until closing curtain travel)

[A1] Approx. Vcc
(from M SW OFF until opening curtain travel on A mode)

BLOCK DIAGRAM OF BATTERY CHECK



A: Approx. 2.45 V
B: Approx. 2.35 V



14. BATTERY CHECK

The voltage V1 is higher than the voltages V2 and V3 when the battery voltage is 3V. The outputs of COMPARATORS OA8 and OA 9 are high. When the battery voltage goes down to Point A, the voltage V1 is lower than V2, but is higher than V3. Then the output of COMPARATOR OA8 (BC A) only turns low. The circuit is held on while the release button is depressed half-way; it will be no longer on when the release button is free. Also in this condition, the shutter will operate normally.

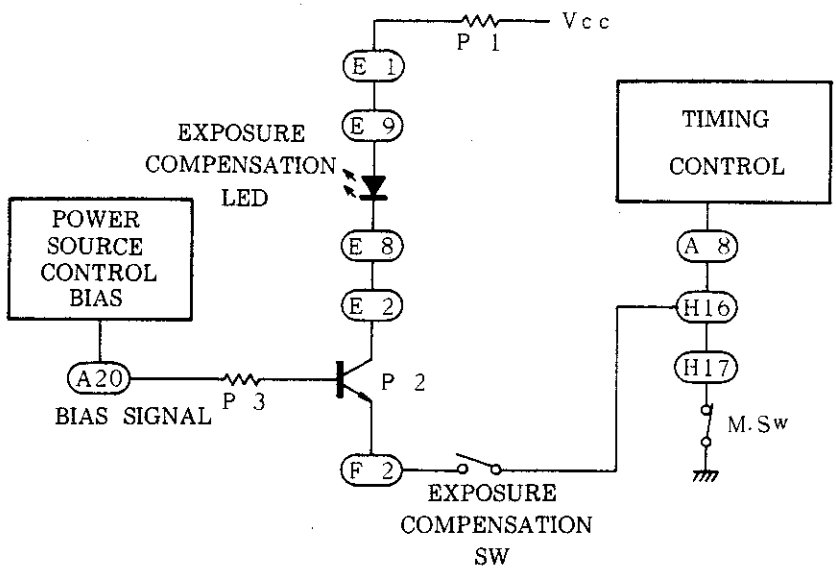
When the battery voltage goes down to Point B, the voltage value V1 is lower than the voltages V2 and V3. The output of COMPARATOR OA9 (BC B) also goes lower and the circuit will not turn on whenever the release button is depressed half-way. Thus the shutter release is locked.

The outputs BC A and BC B are not checked since they are located in the IC. RESISTOR TR5 is for the adjustment of battery check voltage which has been made to fit for individual circuitry.

Checking land:

[G16] [H4] [A21] Approx. 2.3V when BIAS SIGNAL stays high.

BLOCK DIAGRAM OF EXPOSURE COMPENSATION

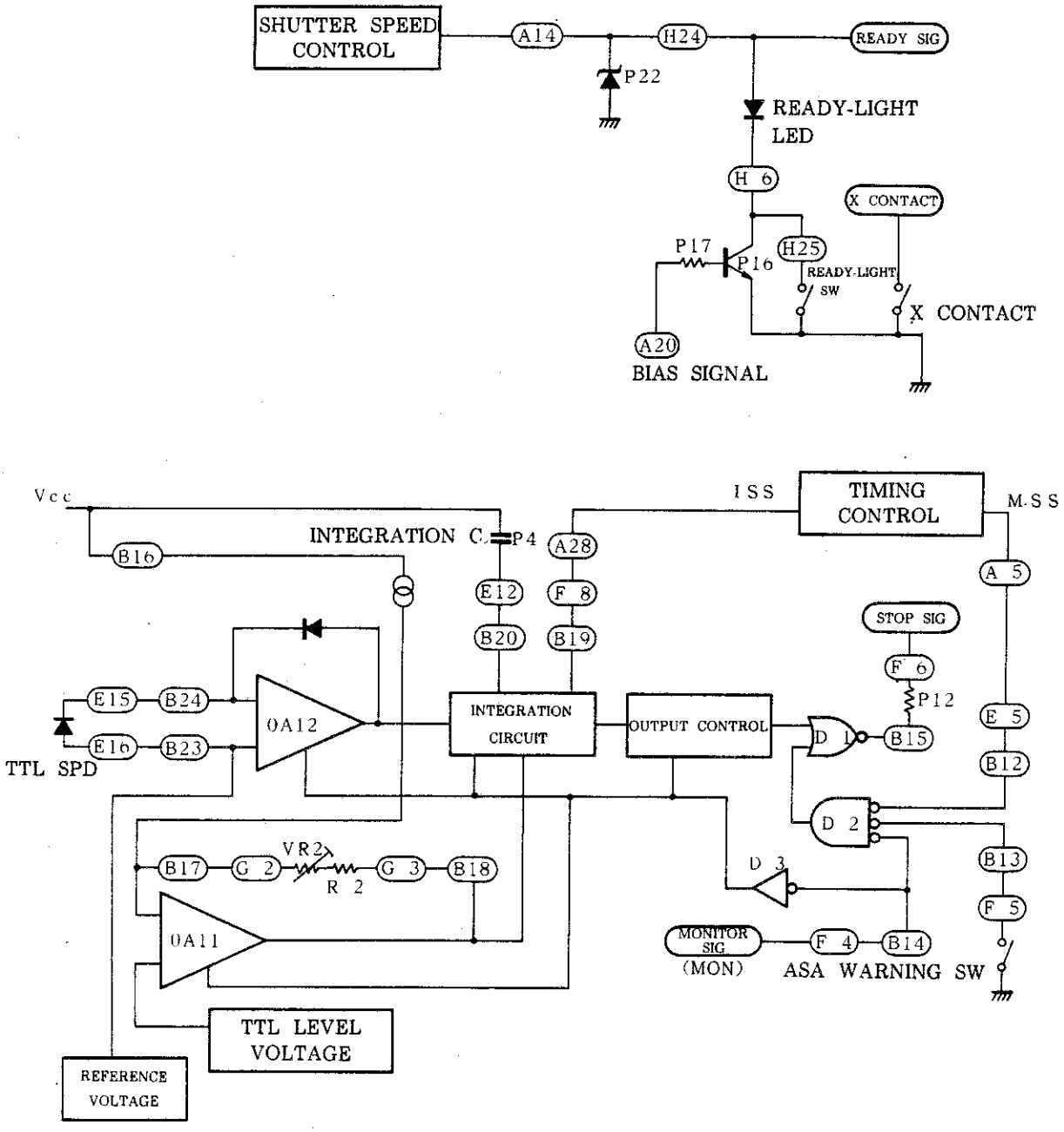


15. EXPOSURE COMPENSATION

The exposure compensation LED lights up in the view-finder to indicate whether the compensation is operated or not.

EXPOSURE COMPENSATION SW is turned on by setting the exposure compensation dial. While M SW is held on for 16 sec., BIAS SIGNAL goes high to turn TRANSISTOR P2 on. Thus the exposure compensation LED lights up. But on shutter release, M SW turns off and the LED will be OFF.

16. BLOCK DIAGRAM OF TTL FLASH OUTPUT CONTROL



STOP SIGNAL:
As soon as the TTL-SPD senses the flash output enough, LAND B15 goes low, and the current is reversed from the speedlight to stop firing.

MONITOR SIGNAL:
MONITOR SIGNAL checks if the speedlight attached is set to the TTL mode. The TTL mode makes the signal of LAND F4 low and the output of DIODE D3 high. This initiates the circuit operation for the TTL output control.

ASA WARNING SW:
Setting the ASA dial to 800 or more turns ASA WARNING SW on. The output of Diode D2 goes high but that of Land B15 becomes low. This condition provides STOP SIGNAL to blink the ready-light LED for blinking (LANDS B12 and B14 are low).

READY-LIGHT SIGNAL:
READY-LIGHT SIGNAL flows to TIMING CONTROL BLOCK when the speedlight attached is switched on. Shutter speed is automatically set to 1/250 sec. on the completion of charging the speedlight, the ready-light LED of the camera lights up.

TTL METERING CIRCUIT

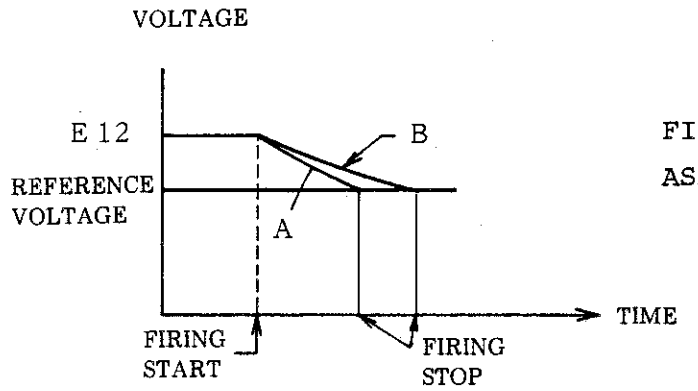
Shutter release turns the X contact on and the speedlight begins to fire. The light travels out to the subject and is reflected back through the lens to the film plane and even to the TTL SPD located in the mirror cage. The TTL SPD generates the current flow in response to the light intensity. TTL METERING CIRCUIT will provide the voltage adequate to the amount of the current flow and put it into the integration circuit.

INTEGRATION CIRCUIT

The voltage of LAND E12 is equal to Vcc before firing. ISS of TIMING CONTROL BLOCK goes high when X CONTACT is turned on, and INTEGRATION CONDENSER P4 starts to charge. Thus the voltage of LAND E12 will be lower. The lowering rate of the voltage of LAND E12 is determined by either the voltage of TTL METERING CIRCUIT or the voltage of TTL LEVEL BLOCK (ASA SET). The more the light is sensed, the faster the voltage of LAND E12 goes down. Also the higher ASA setting allows the voltage of LAND E12 to be lower quickly. This shift is put into FLASH OUTPUT COTROL CIRCUIT.

FLASH OUTPUT CONTROL

FLASH OUTPUT CONTROL CIRCUIT holds the reference voltage and will check the input voltage from INTEGRATION CIRCUIT against it. The voltage of LAND E12 is equal to Vcc and is higher than the reference voltage before firing the speedlight. But firing the speedlight will lower the voltage of LAND E12. As soon as the voltage of LAND E12 is lower than the reference voltage, the output voltage of FLASH OUTPUT CONTROL CIRCUIT will turn high. Then the voltage of LAND B15 goes low to deliver STOP SIGNAL. See the figure below.



FIRING TIME: A < B
ASA SET : A > B

Checking land:	[A14] [H24]	Approx.	2V
	[H6]	Approx.	0.1V
	[F6]	Approx.	4V
	[F4]	Approx.	0.3V
	X contact	Approx.	4.5V

Even before the frame counter reaches "1", shutter speed is automatically set to 1/250 sec. on A/M modes (if the speed is set to 1/500 sec. or more) with the speedlight attached.

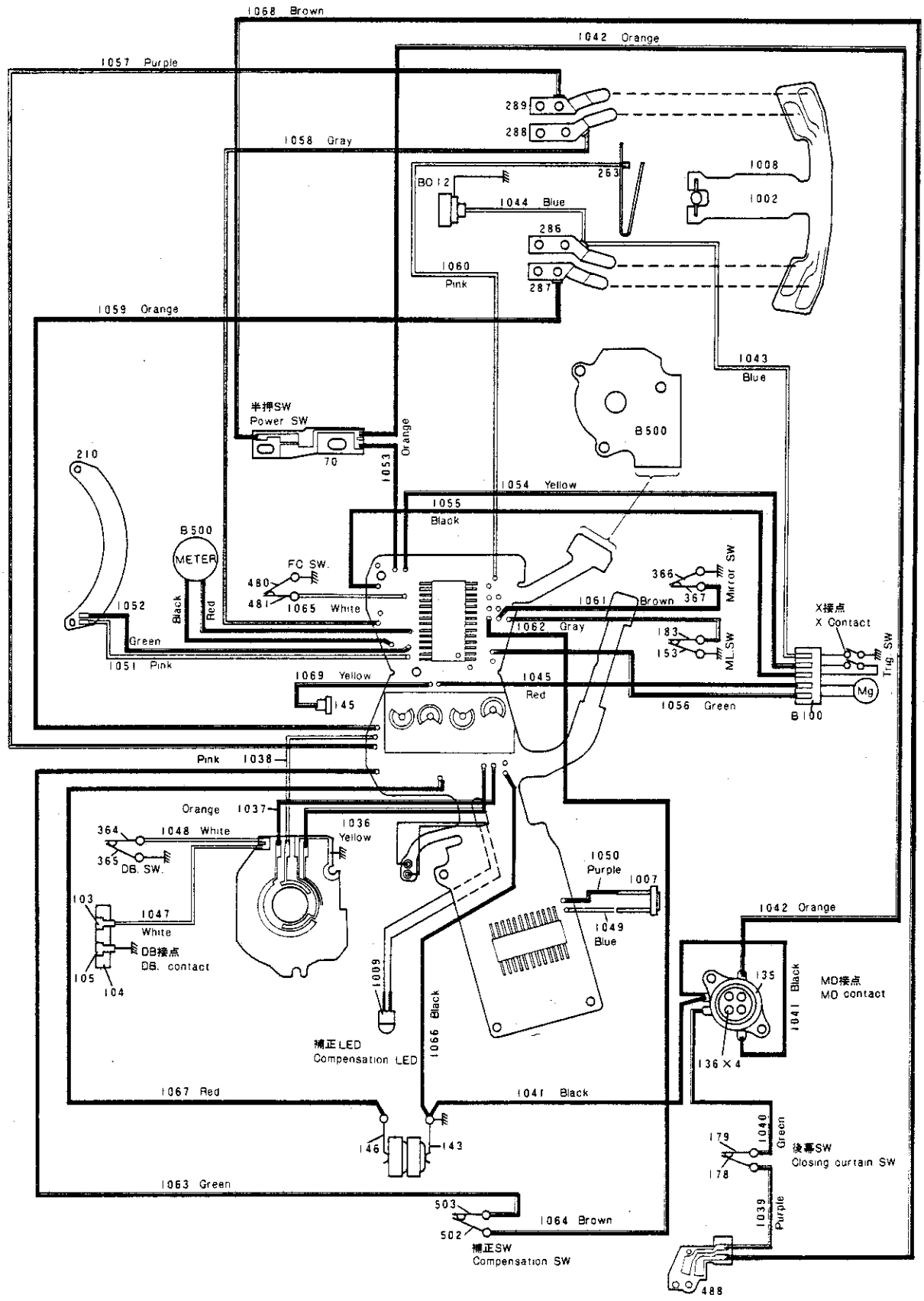
[2] ELECTRIC CIRCUIT

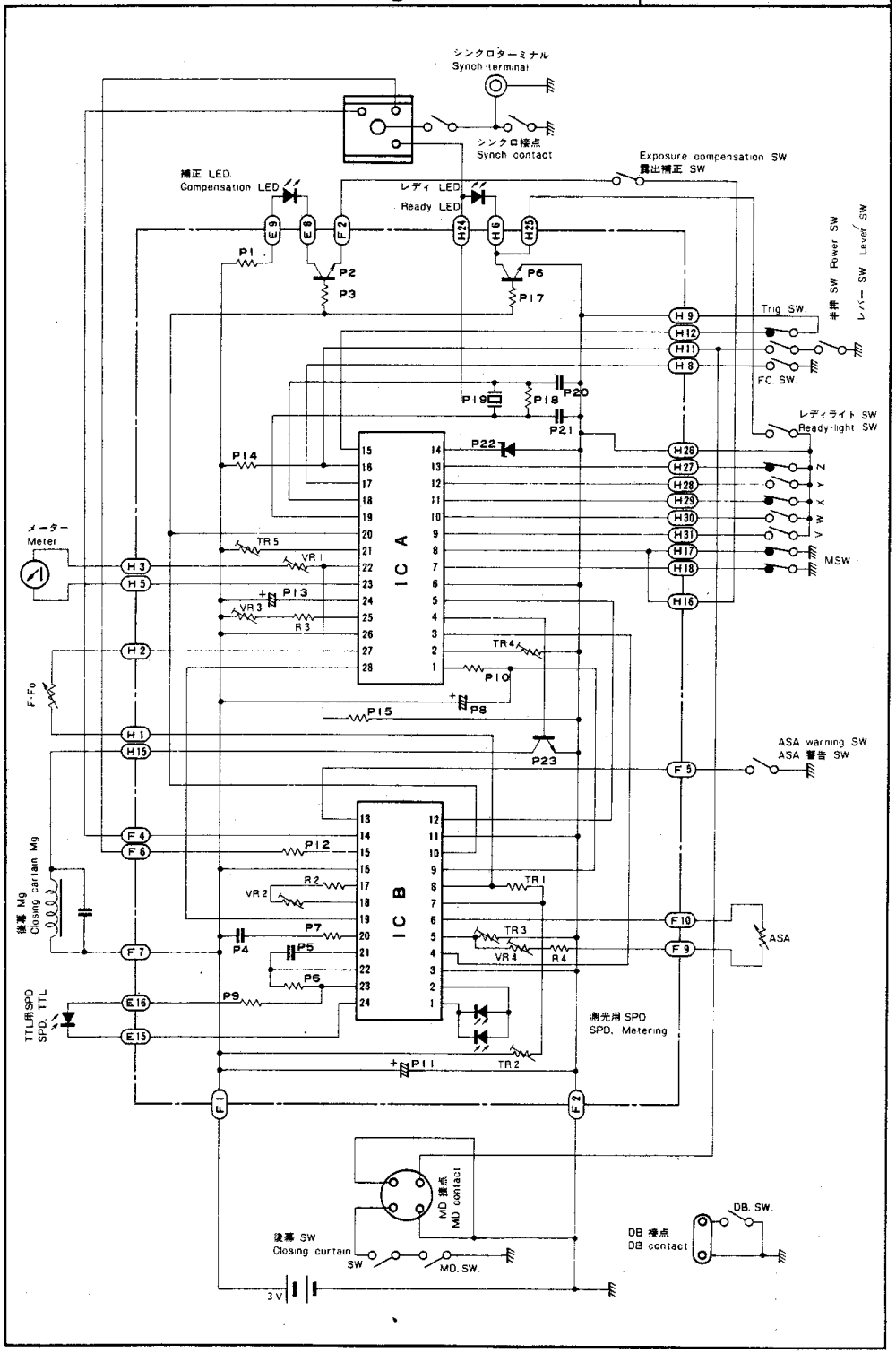
Contents

		Page
1.	Wring Diagram	E1
2.	Circuit Diagram	E2
3.	FPC (#1001)	E3
4.	FPC Checking Lands	E4
5.	FPC (#1001) (Independent Parts)	E5
6.	Circuitry Troubleshooting Flowchart	E6
7.	Timing Chart	E52

1. 実体配線図　Wiring Diagram

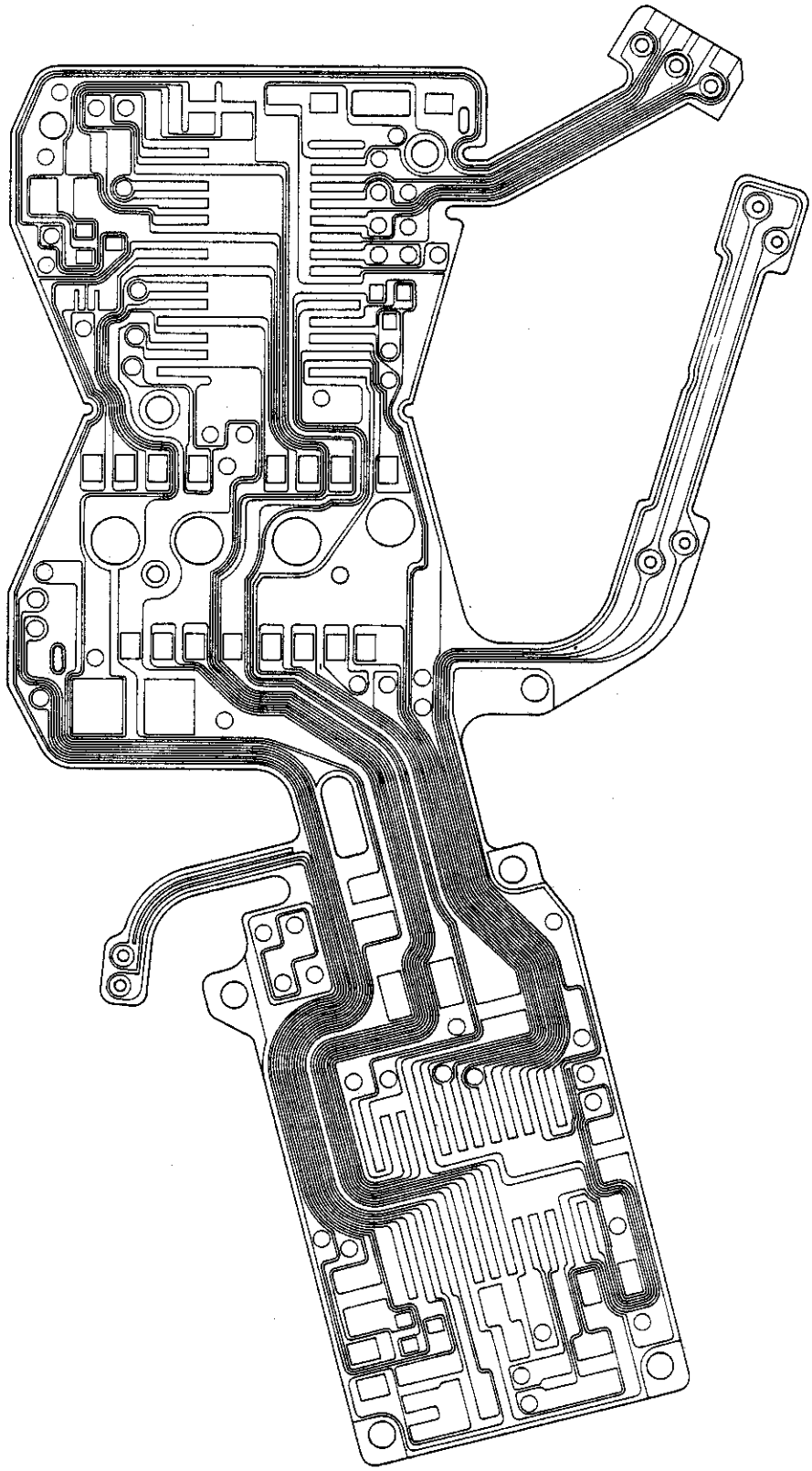
FAA17001-R. 3115. A

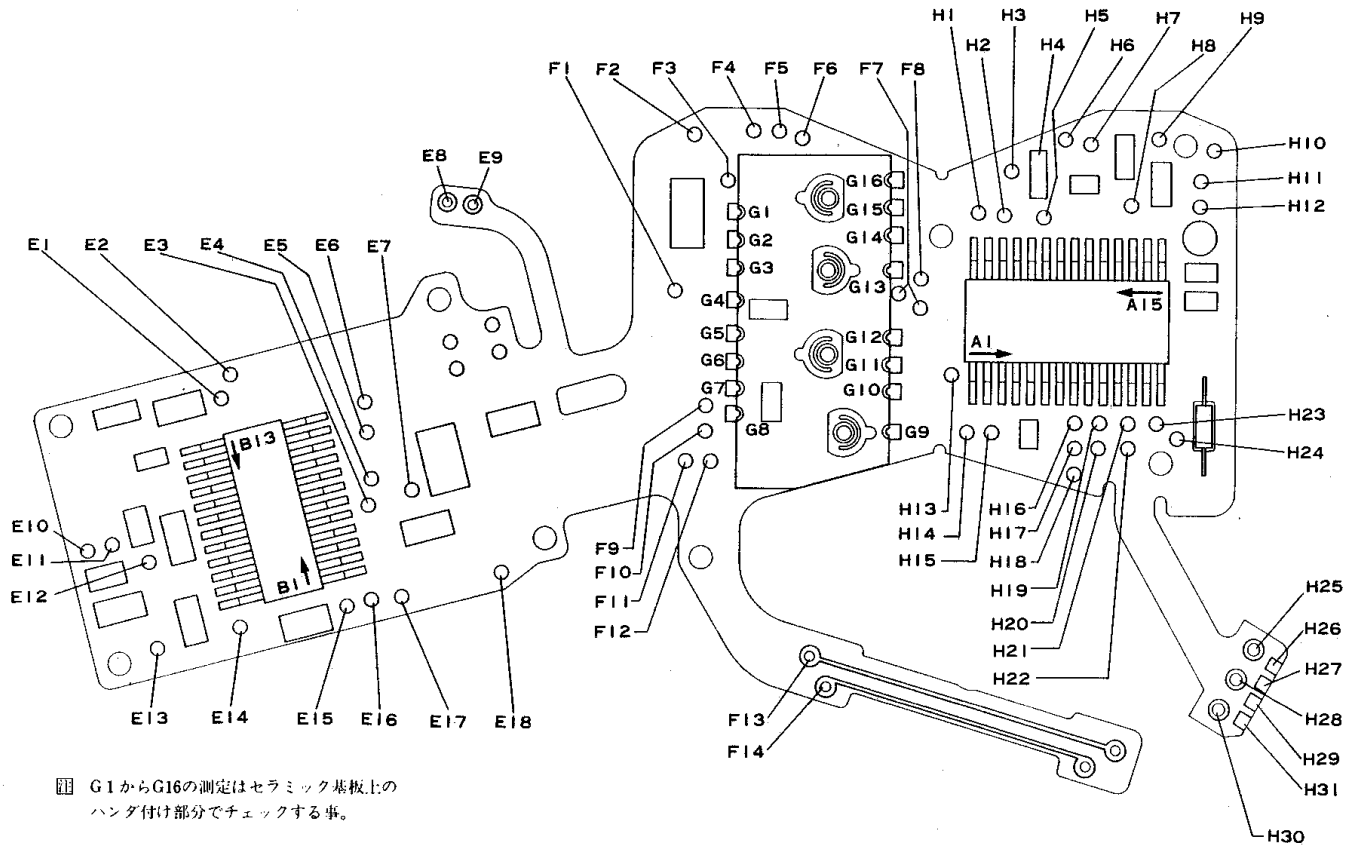



シンクロターミナル
Synch terminal
シンクロ接点
Synch contact
補正 LED
Compensation LED
レディ LED
Ready LED
Exposure compensation SW
露出補正 SW
半押 SW Power SW
レバー SW Lever SW
Trig. SW.
FC. SW.
レディライト SW
Ready-light SW
MSW
メーター
Meter
F-Fo
IC A
IC B
ASA warning SW
ASA 警告 SW
ASA
後幕 Mg
Closing curtain Mg
TTL用SPD
SPD. TTL
測光用 SPD
SPD. Metering
MD 接点
MD contact
後幕 SW
Closing curtain SW
MD. SW.
DB 接点
DB contact
DB. SW.
3V

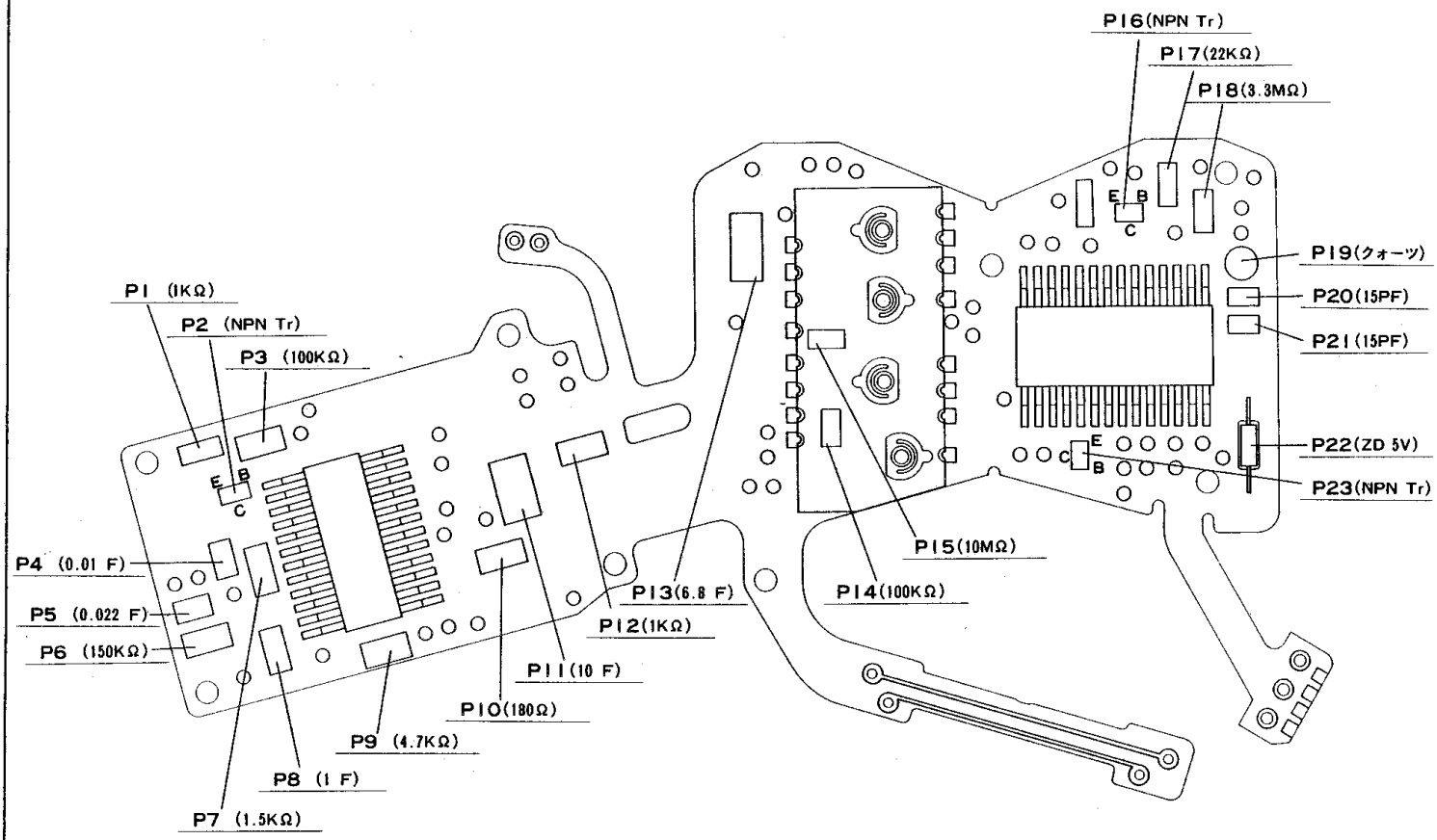
3．FPC(#1001)

FAA17001-R. 3115. A





注 G1からG16の測定はセラミック基板上のハンダ付け部分でチェックする事。


P16(NPN Tr)
P17(22KΩ)
P18(3.3MΩ)
E B C
P19(クォーツ)
P20(15PF)
P21(15PF)
P22(ZD 5V)
E B C
P23(NPN Tr)
P1 (1KΩ)
P2 (NPN Tr)
P3 (100KΩ)
E B C
P4 (0.01 F)
P5 (0.022 F)
P6 (150KΩ)
P7 (1.5KΩ)
P8 (1 F)
P9 (4.7KΩ)
P10(180Ω)
P11(10 F)
P12(1KΩ)
P13(6.8 F)
P14(100KΩ)
P15(10MΩ)

注 P5は誤動作防止用

CIRCUITRY TROUBLESHOOTING FLOWCHART

(1) Conditions of measurement

Lens: 50mm F1.4 ASA: 100
Exposure compensation setting: 0
Aperture: 5.6 Mode: Automatic
Frame counter: 1 or more
Film-advance lever: Stand-off position
Shutter: Charged Power voltage: 3 V
Measurement of voltage and current: Meter switch is ON
Resistor measurement: Meter switch is OFF

(2) Checking lands

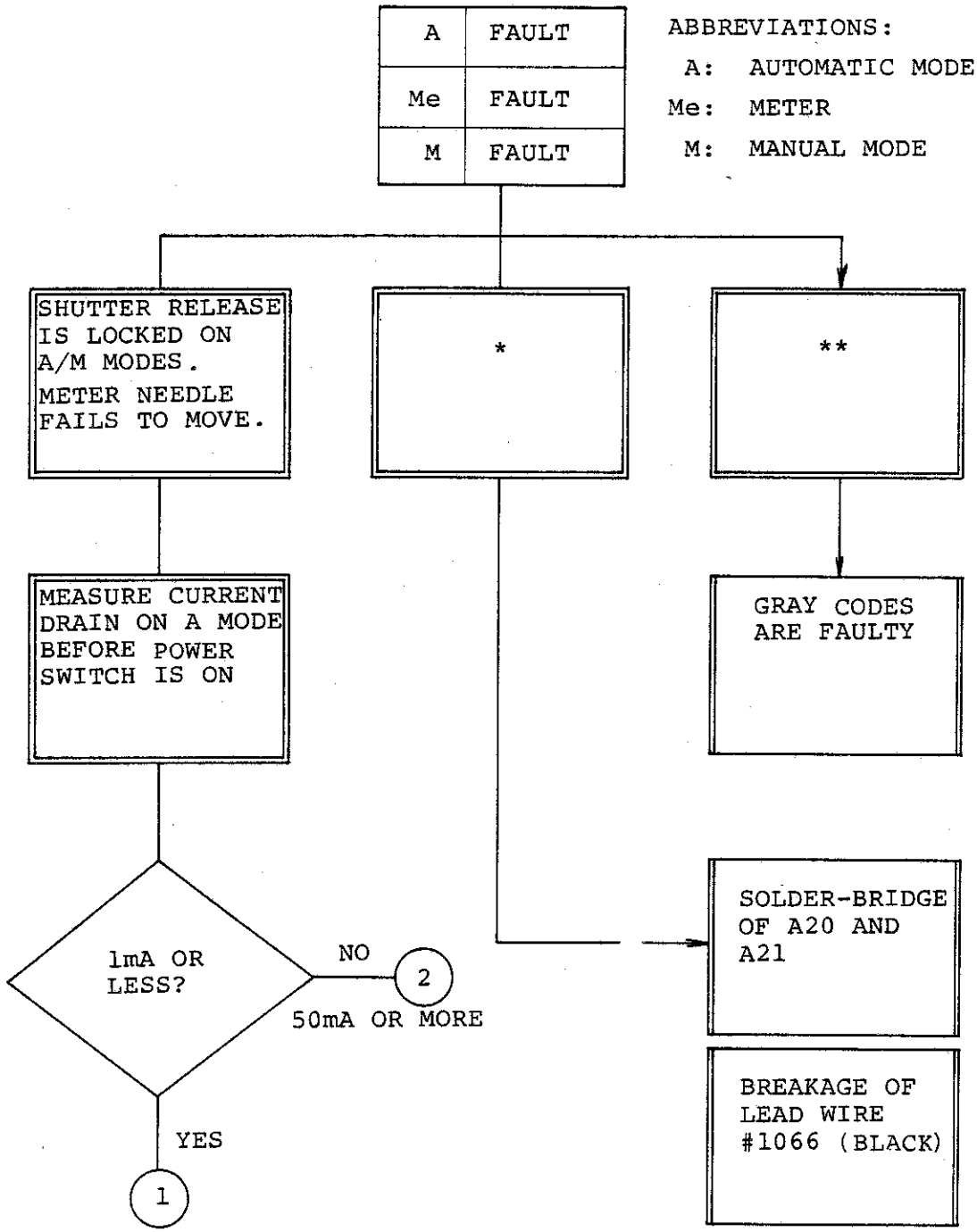
A + number ——— Pin of ICA
B + number ——— Pin of ICB
E + number ——— Checking land of FPC
F + number ——— Checking land of FPC
H + number ——— Checking land of FPC
* G + number ——— Solder joint of resistor block
P + number ——— Independent resistors, condensers, etc.

* Measurement should be done at the body of resistor block.

(3) Tools: Digital multi-meter J9003-3
Oscilloscope
DC regurated power supply J9001-5
Tool battery

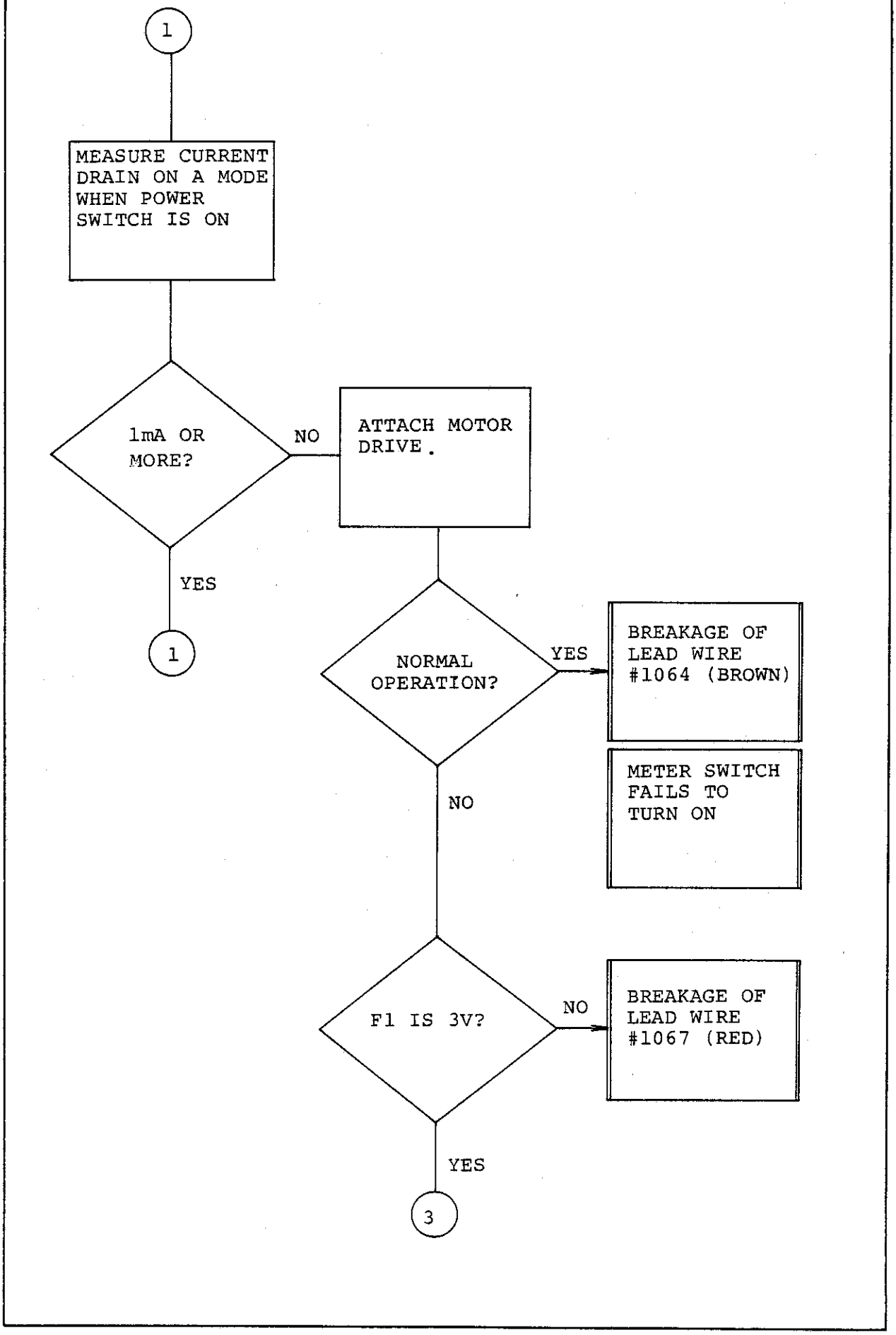
(4) Abbreviations:

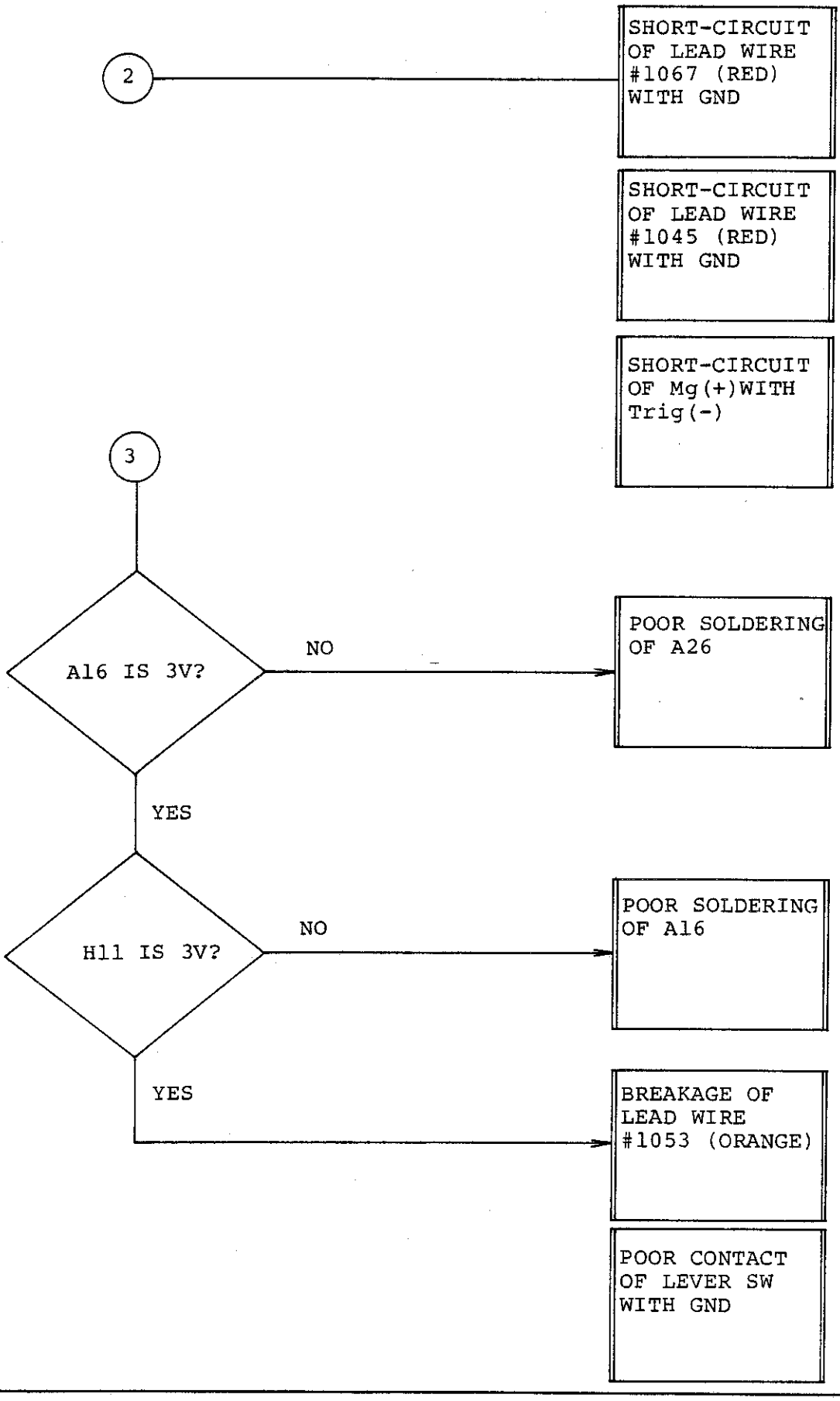
ML.SW: Memory lock switch
Mg: Closing curtain magnet
M.SW : Mirror switch
Trig: Trigger switch
FC.SW: Frame-counter switch

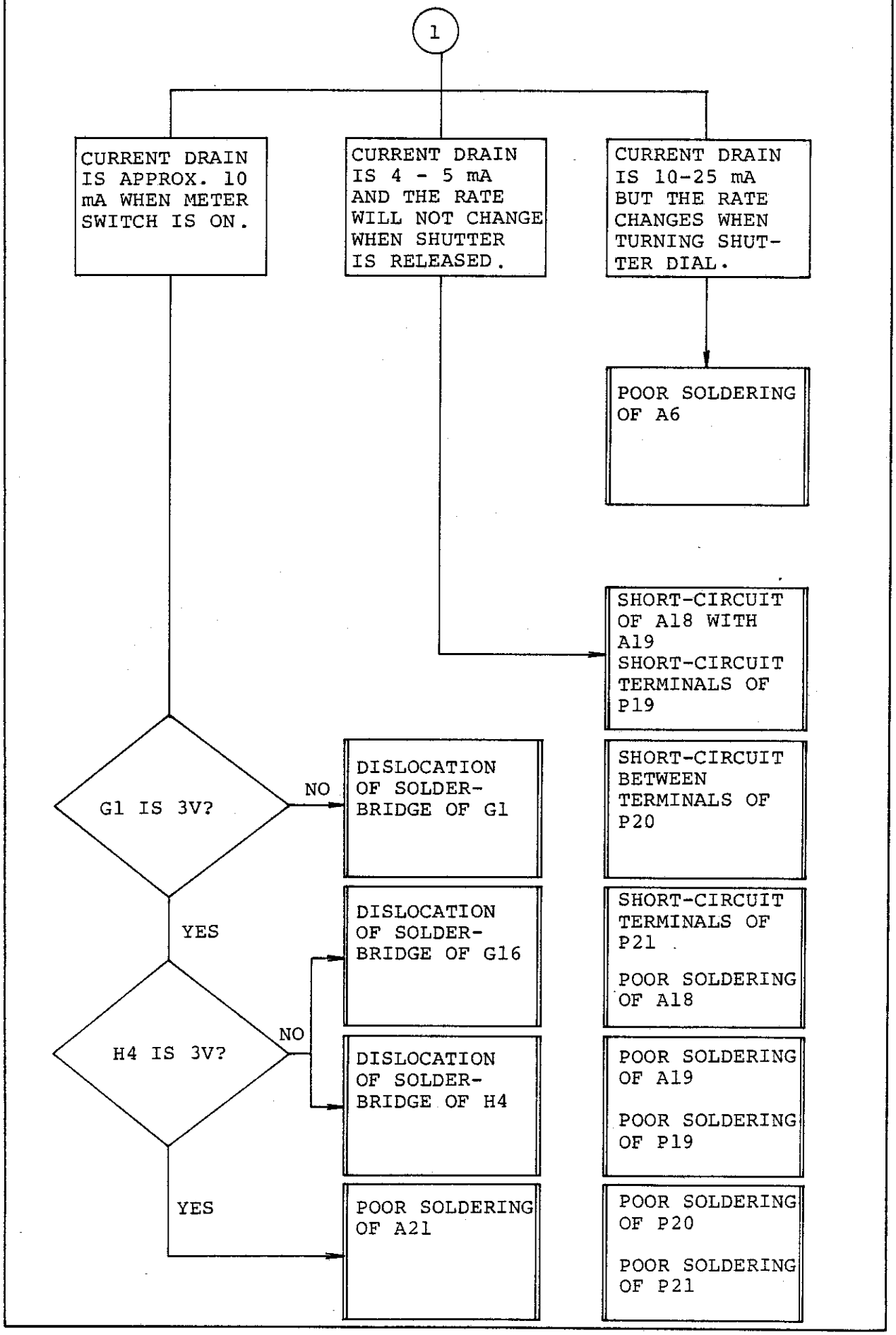


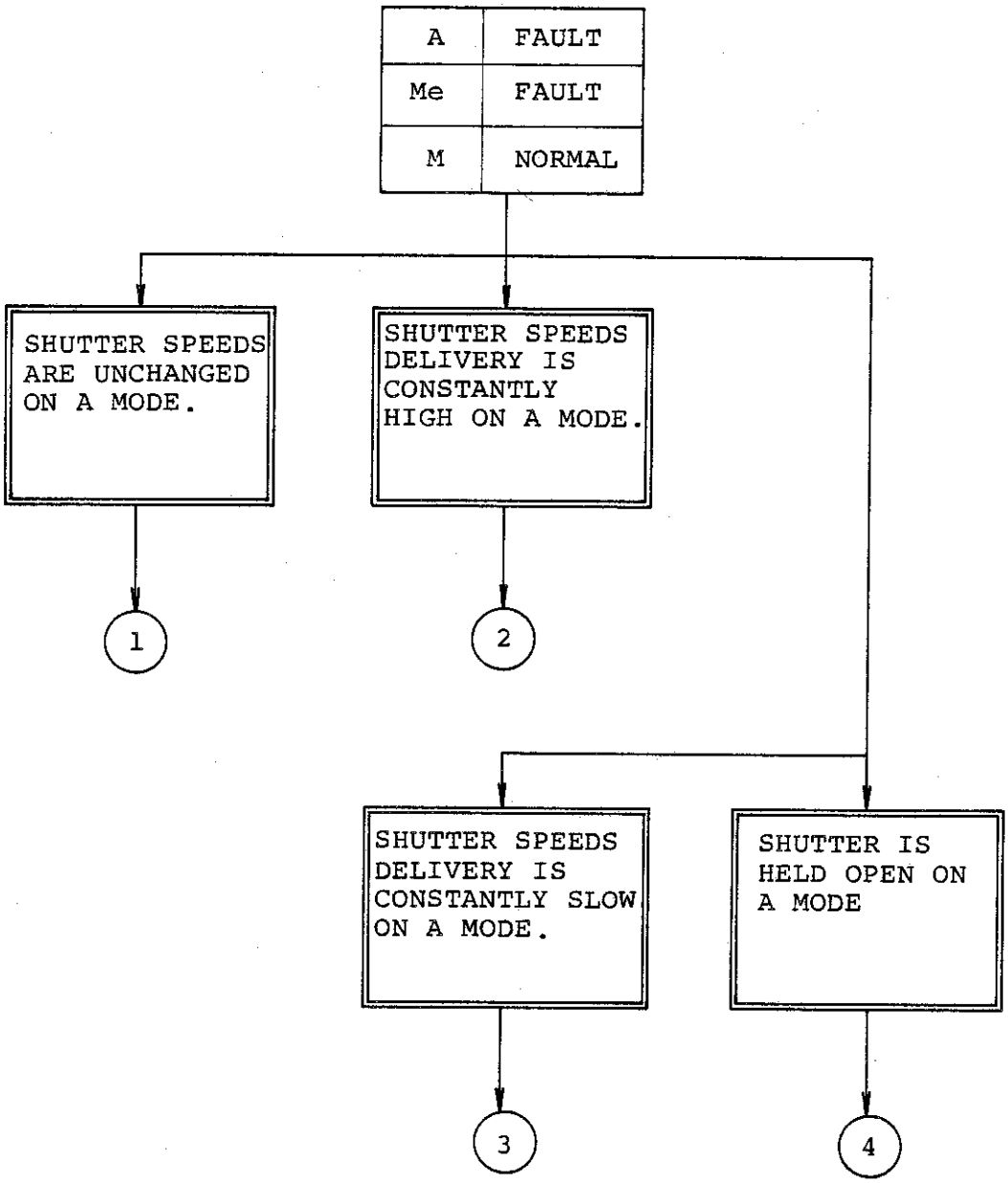
* SHUTTER RELEASE IS LOCKED. SHUTTER SPEED IS CONSTANTLY SLOW ON A/M MODES. METER NEEDLE MOVES SLIGHTLY WHEN POWER SWITCH IS ON.

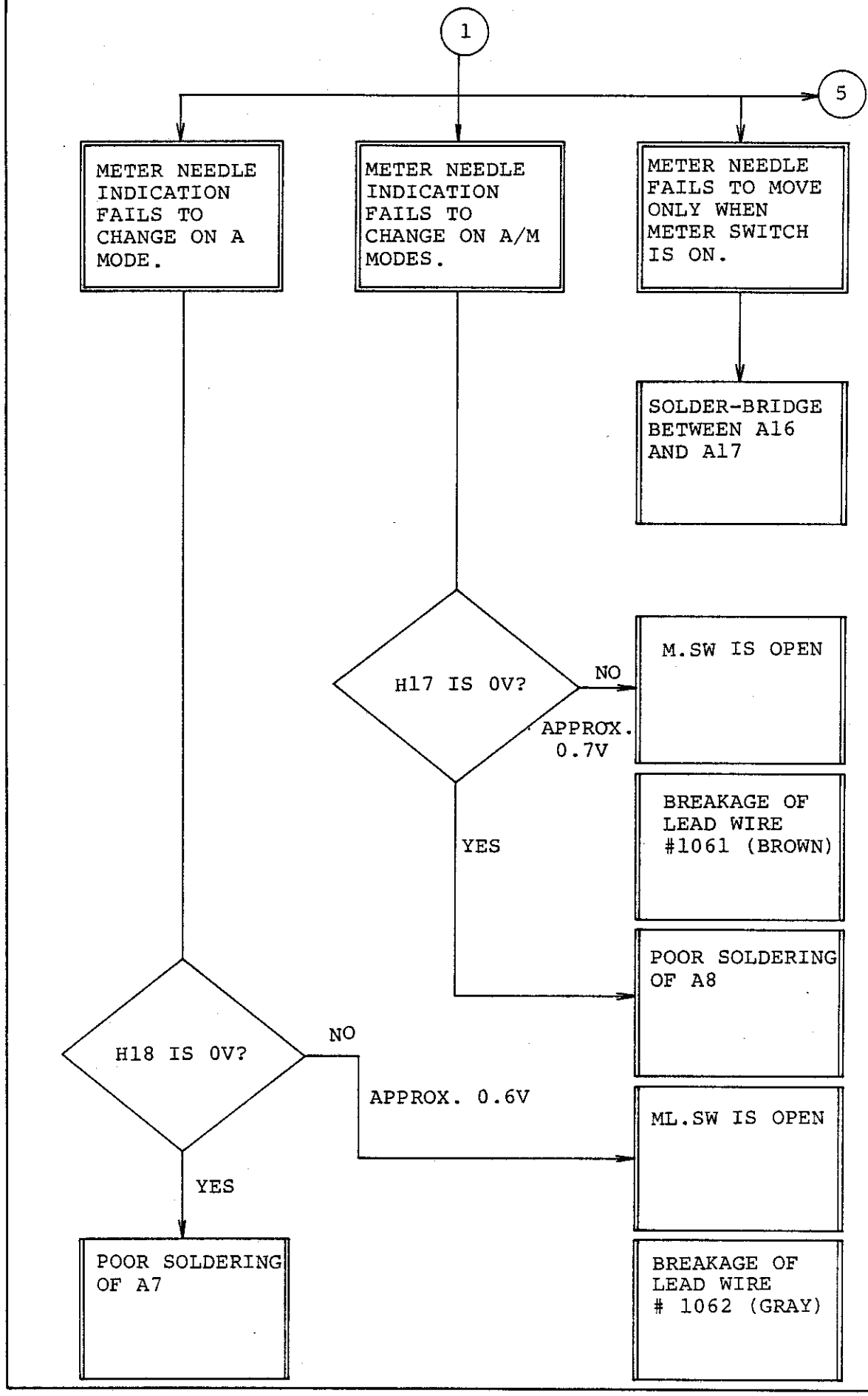
** SHUTTER SPEEDS DELIVERY IS 1/1000 SEC. ONLY ON A MODE. SHUTTER RELEASE IS LOCKED AT 4 SEC. AND 8 SEC. ON M MODE. METER NEEDLE FAILS TO MOVE AT 4 SEC. AND 8 SEC.

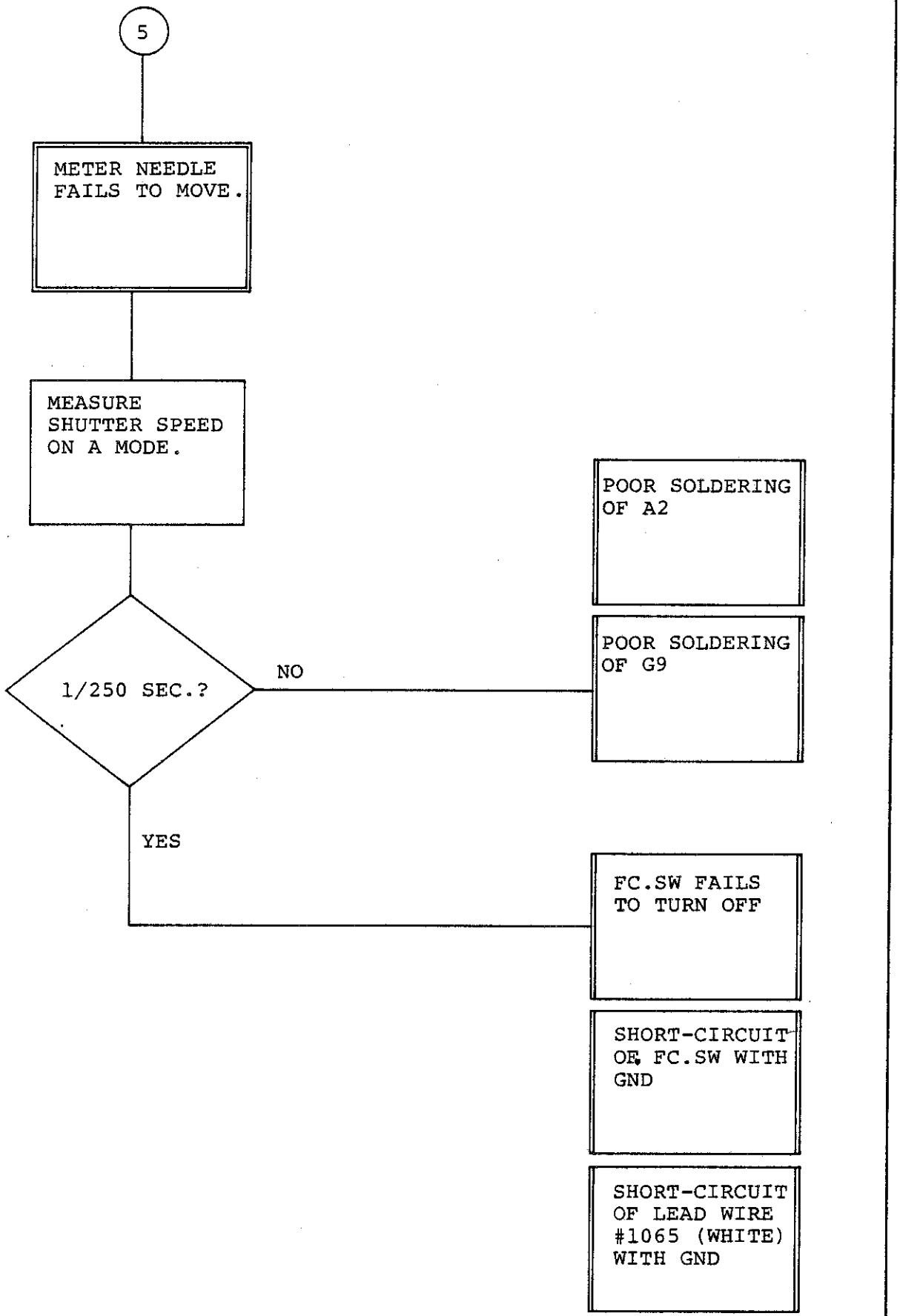

1
MEASURE CURRENT DRAIN ON A MODE WHEN POWER SWITCH IS ON
1mA OR MORE?
NO
ATTACH MOTOR DRIVE.
YES
1
NORMAL OPERATION?
YES
BREAKAGE OF LEAD WIRE #1064 (BROWN)
METER SWITCH FAILS TO TURN ON
NO
F1 IS 3V?
NO
BREAKAGE OF LEAD WIRE #1067 (RED)
YES
3

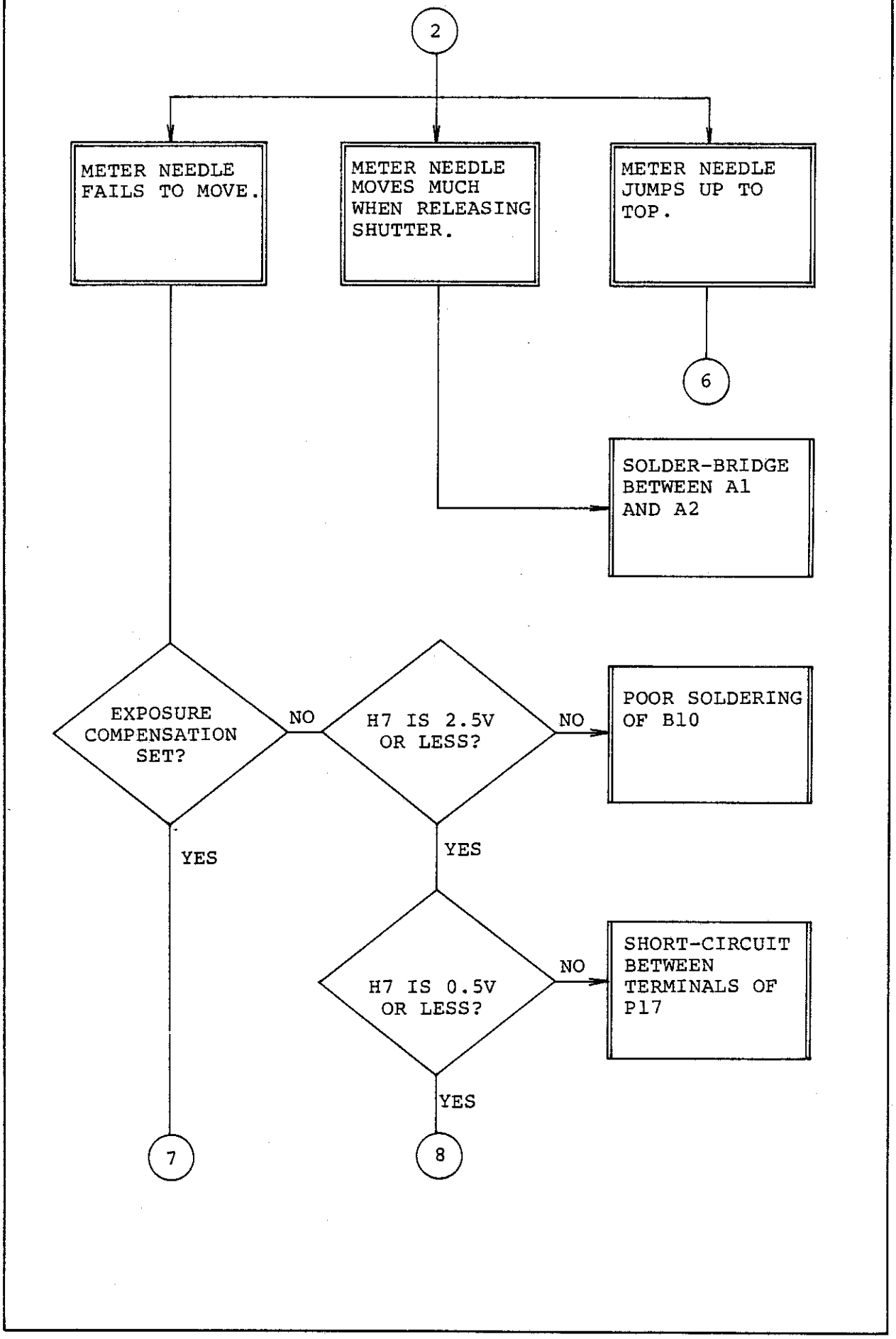

2
SHORT-CIRCUIT OF LEAD WIRE #1067 (RED) WITH GND
SHORT-CIRCUIT OF LEAD WIRE #1045 (RED) WITH GND
SHORT-CIRCUIT OF Mg(+)WITH Trig(-)
3
A16 IS 3V?
NO
POOR SOLDERING OF A26
YES
H11 IS 3V?
NO
POOR SOLDERING OF A16
YES
BREAKAGE OF LEAD WIRE #1053 (ORANGE)
POOR CONTACT OF LEVER SW WITH GND

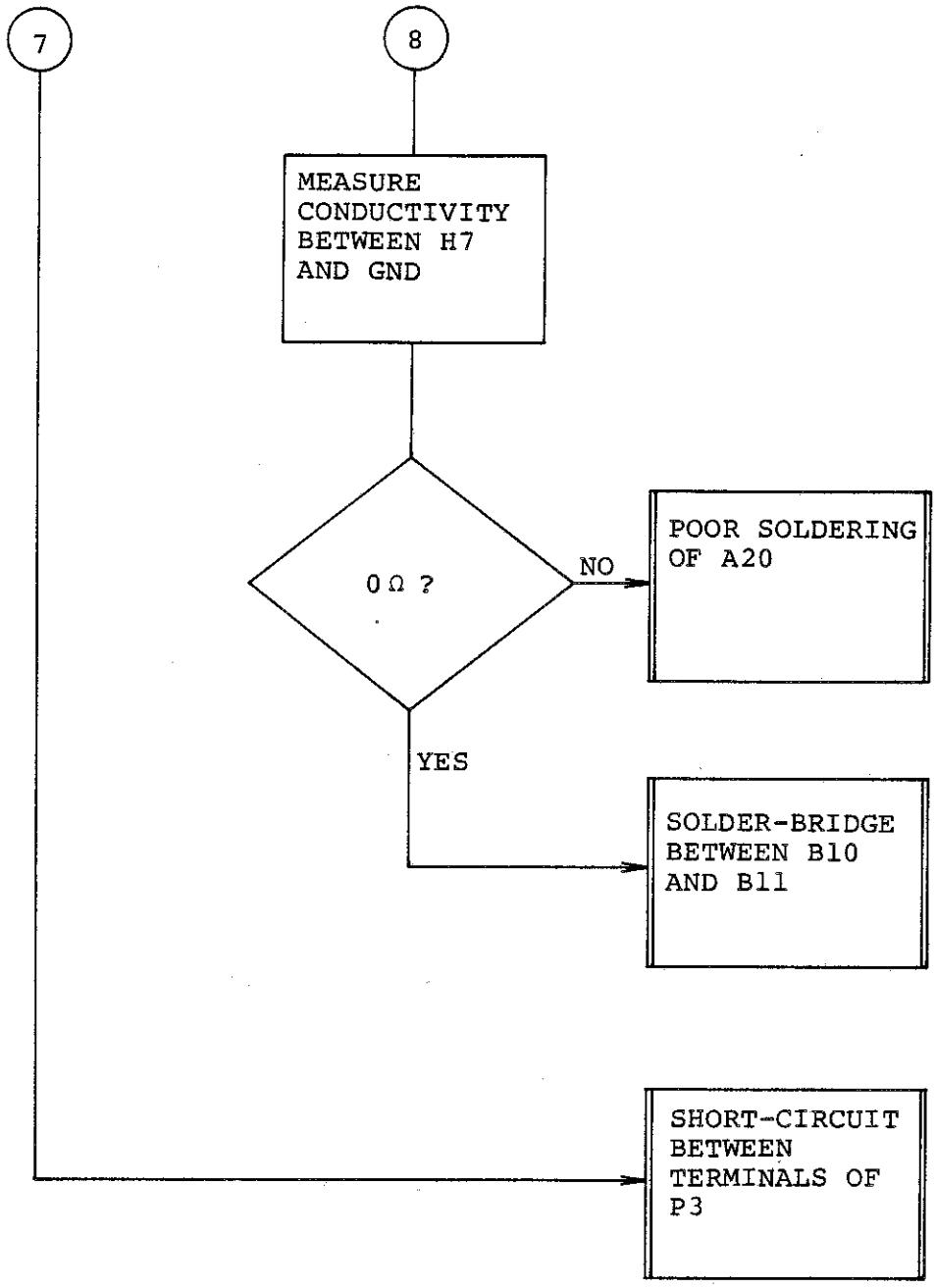

1
CURRENT DRAIN IS APPROX. 10 mA WHEN METER SWITCH IS ON.
CURRENT DRAIN IS 4 - 5 mA AND THE RATE WILL NOT CHANGE WHEN SHUTTER IS RELEASED.
CURRENT DRAIN IS 10-25 mA BUT THE RATE CHANGES WHEN TURNING SHUTTER DIAL.
POOR SOLDERING OF A6
SHORT-CIRCUIT OF A18 WITH A19
SHORT-CIRCUIT TERMINALS OF P19
G1 IS 3V?
NO
DISLOCATION OF SOLDER-BRIDGE OF G1
SHORT-CIRCUIT BETWEEN TERMINALS OF P20
YES
DISLOCATION OF SOLDER-BRIDGE OF G16
SHORT-CIRCUIT TERMINALS OF P21
POOR SOLDERING OF A18
H4 IS 3V?
NO
DISLOCATION OF SOLDER-BRIDGE OF H4
POOR SOLDERING OF A19
POOR SOLDERING OF P19
YES
POOR SOLDERING OF A21
POOR SOLDERING OF P20
POOR SOLDERING OF P21

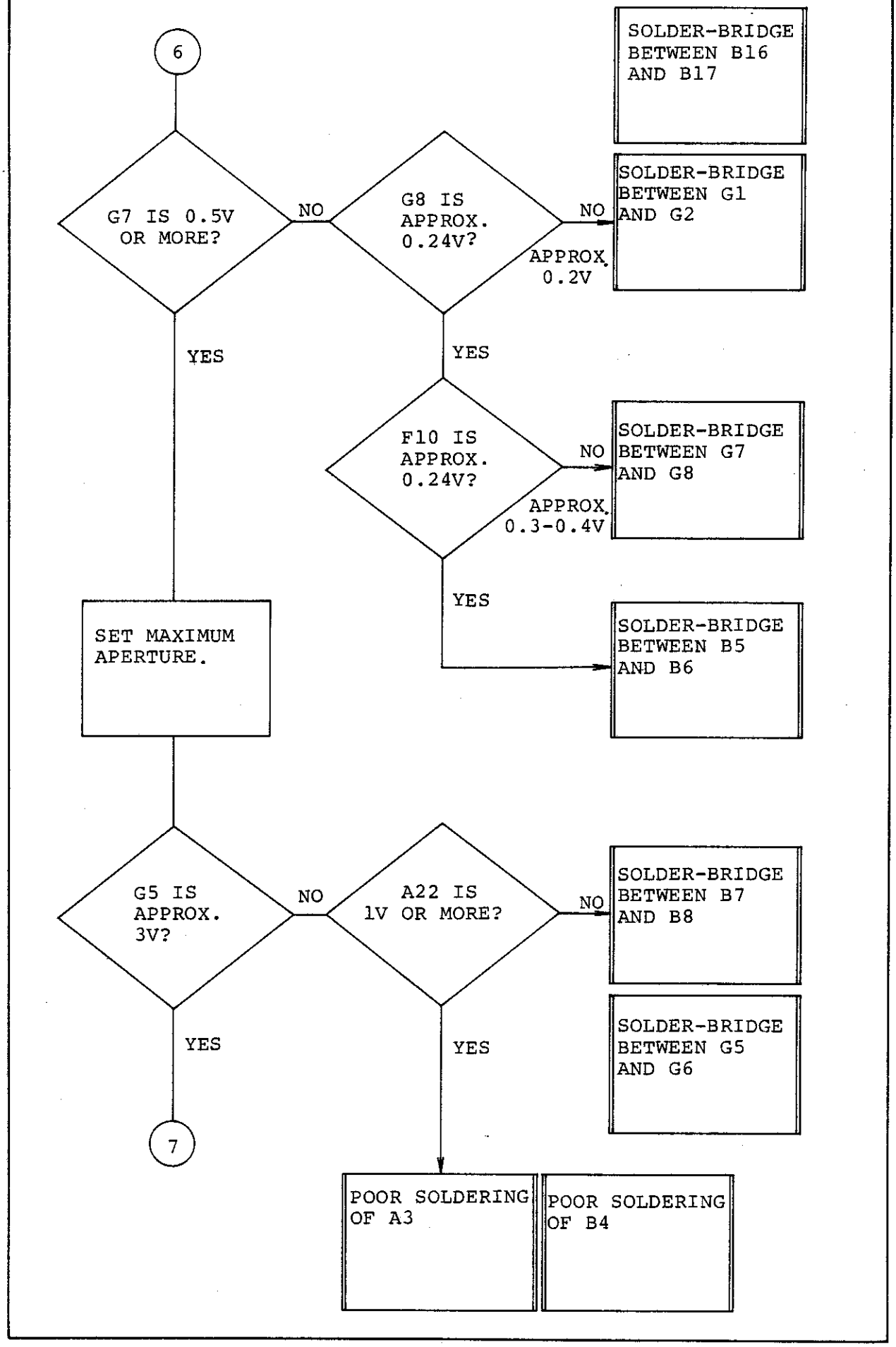

A FAULT
Me FAULT
M NORMAL
SHUTTER SPEEDS ARE UNCHANGED ON A MODE.
SHUTTER SPEEDS DELIVERY IS CONSTANTLY HIGH ON A MODE.
SHUTTER SPEEDS DELIVERY IS CONSTANTLY SLOW ON A MODE.
SHUTTER IS HELD OPEN ON A MODE
1
2
3
4

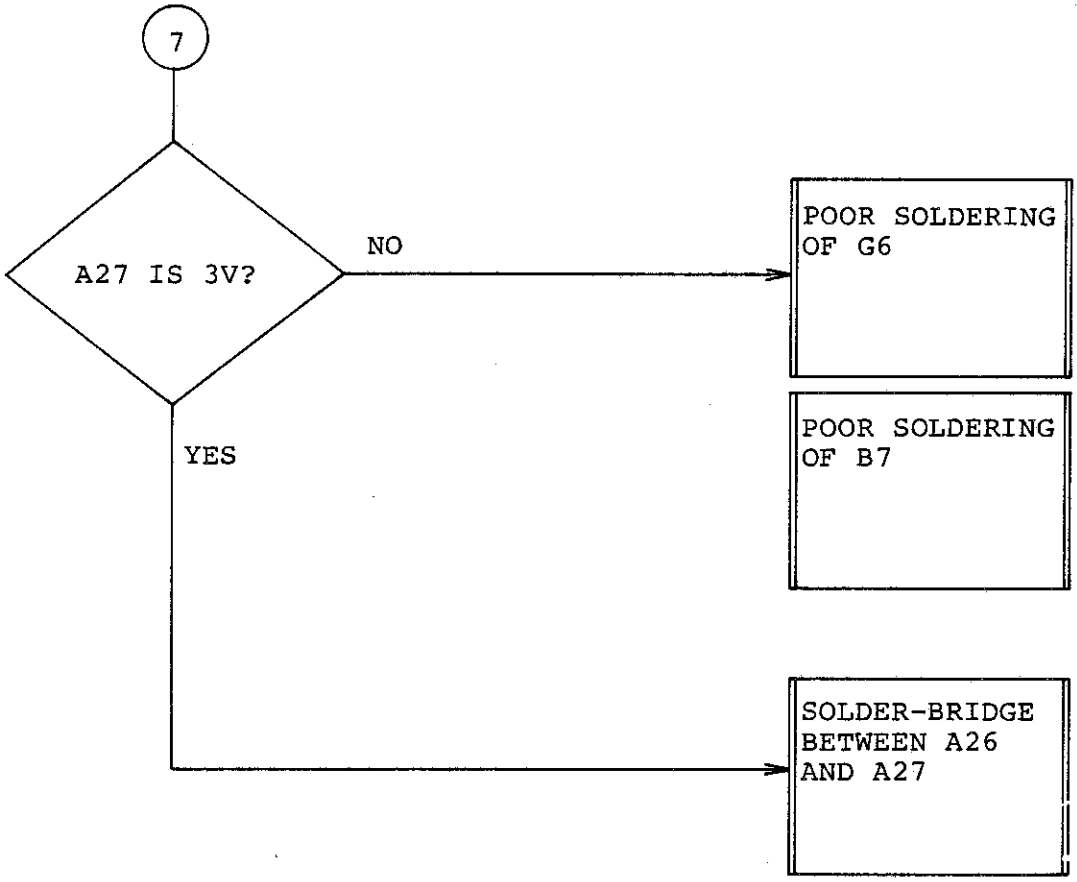

1
5
METER NEEDLE INDICATION FAILS TO CHANGE ON A MODE.
METER NEEDLE INDICATION FAILS TO CHANGE ON A/M MODES.
METER NEEDLE FAILS TO MOVE ONLY WHEN METER SWITCH IS ON.
SOLDER-BRIDGE BETWEEN A16 AND A17
H17 IS 0V?
NO
APPROX. 0.7V
M.SW IS OPEN
YES
BREAKAGE OF LEAD WIRE #1061 (BROWN)
POOR SOLDERING OF A8
H18 IS 0V?
NO
APPROX. 0.6V
ML.SW IS OPEN
YES
POOR SOLDERING OF A7
BREAKAGE OF LEAD WIRE # 1062 (GRAY)

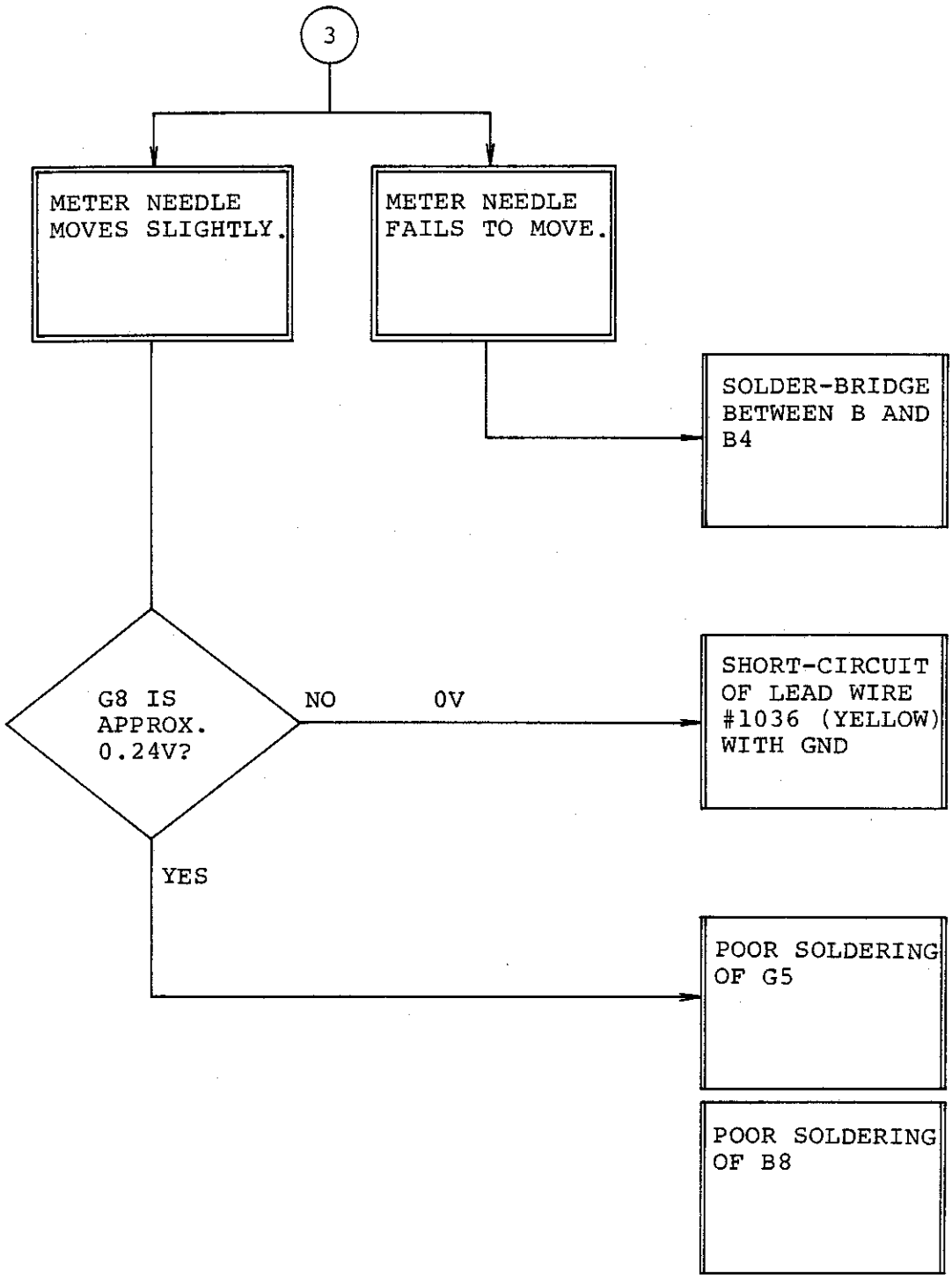

5
METER NEEDLE FAILS TO MOVE.
MEASURE SHUTTER SPEED ON A MODE.
1/250 SEC.?
NO
YES
POOR SOLDERING OF A2
POOR SOLDERING OF G9
FC.SW FAILS TO TURN OFF
SHORT-CIRCUIT OF FC.SW WITH GND
SHORT-CIRCUIT OF LEAD WIRE #1065 (WHITE) WITH GND

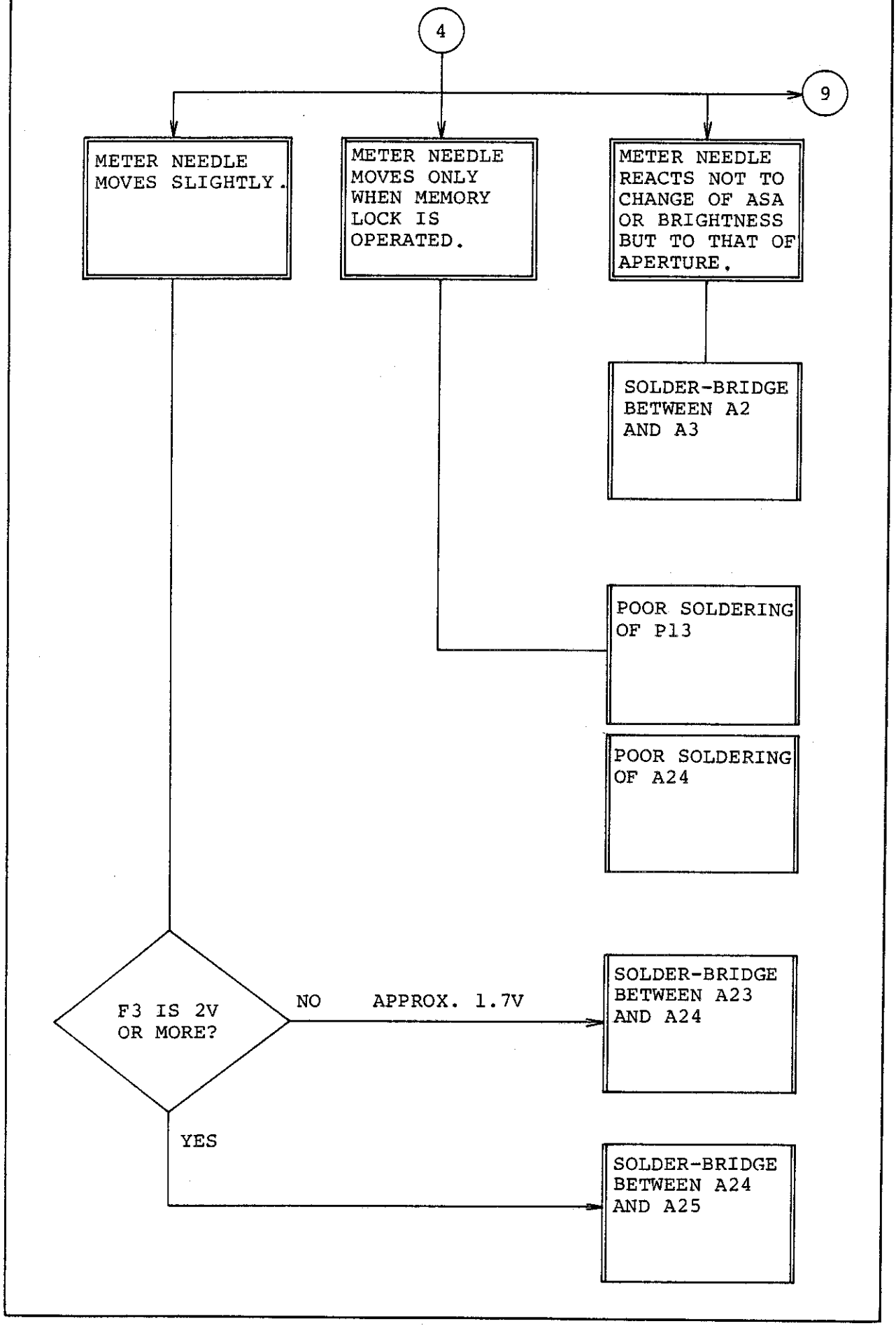

2
METER NEEDLE FAILS TO MOVE.
METER NEEDLE MOVES MUCH WHEN RELEASING SHUTTER.
METER NEEDLE JUMPS UP TO TOP.
6
SOLDER-BRIDGE BETWEEN A1 AND A2
EXPOSURE COMPENSATION SET?
NO
H7 IS 2.5V OR LESS?
NO
POOR SOLDERING OF B10
YES
YES
H7 IS 0.5V OR LESS?
NO
SHORT-CIRCUIT BETWEEN TERMINALS OF P17
YES
7
8

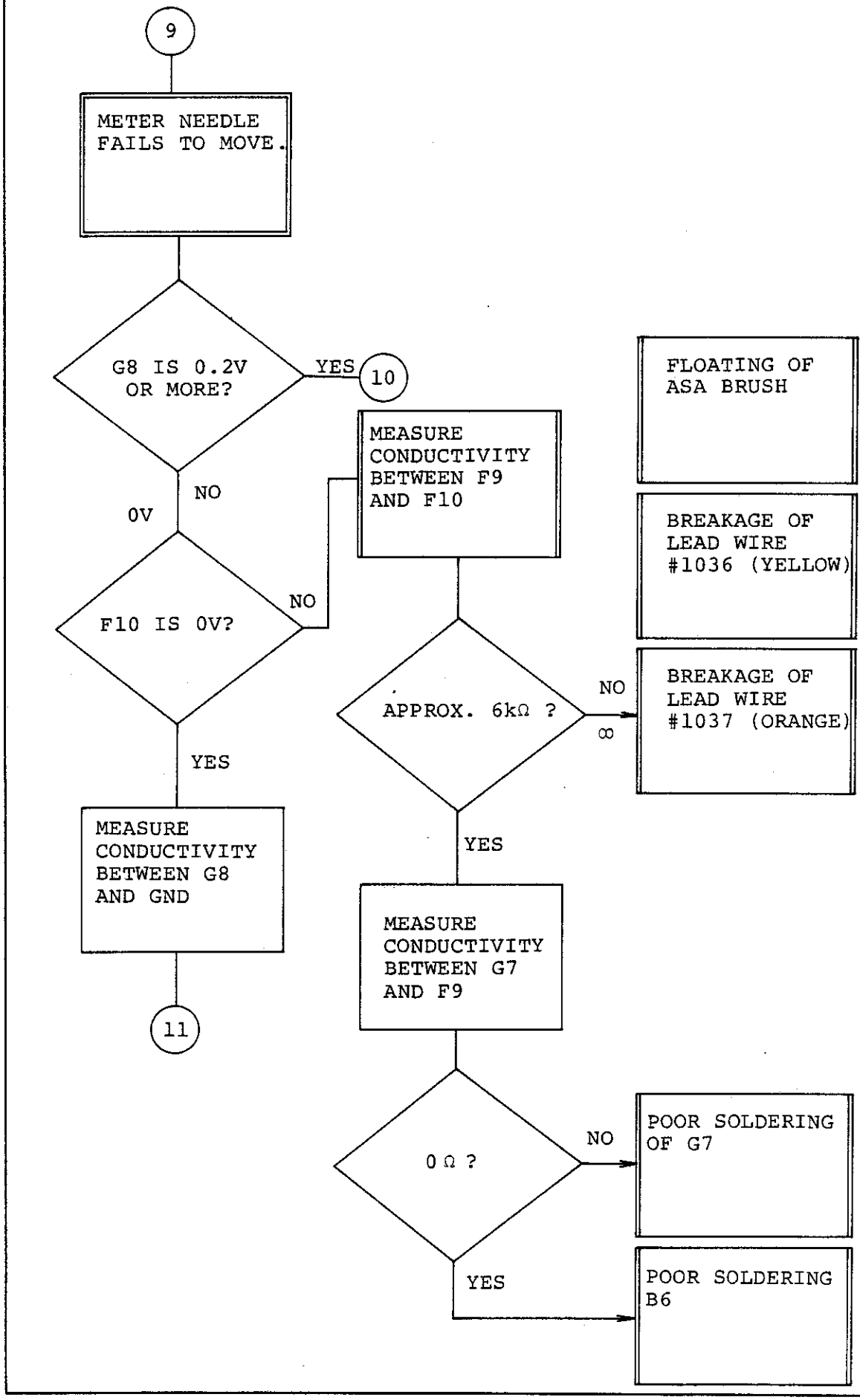

7
8
MEASURE CONDUCTIVITY BETWEEN H7 AND GND
0 Ω ?
NO
POOR SOLDERING OF A20
YES
SOLDER-BRIDGE BETWEEN B10 AND B11
SHORT-CIRCUIT BETWEEN TERMINALS OF P3

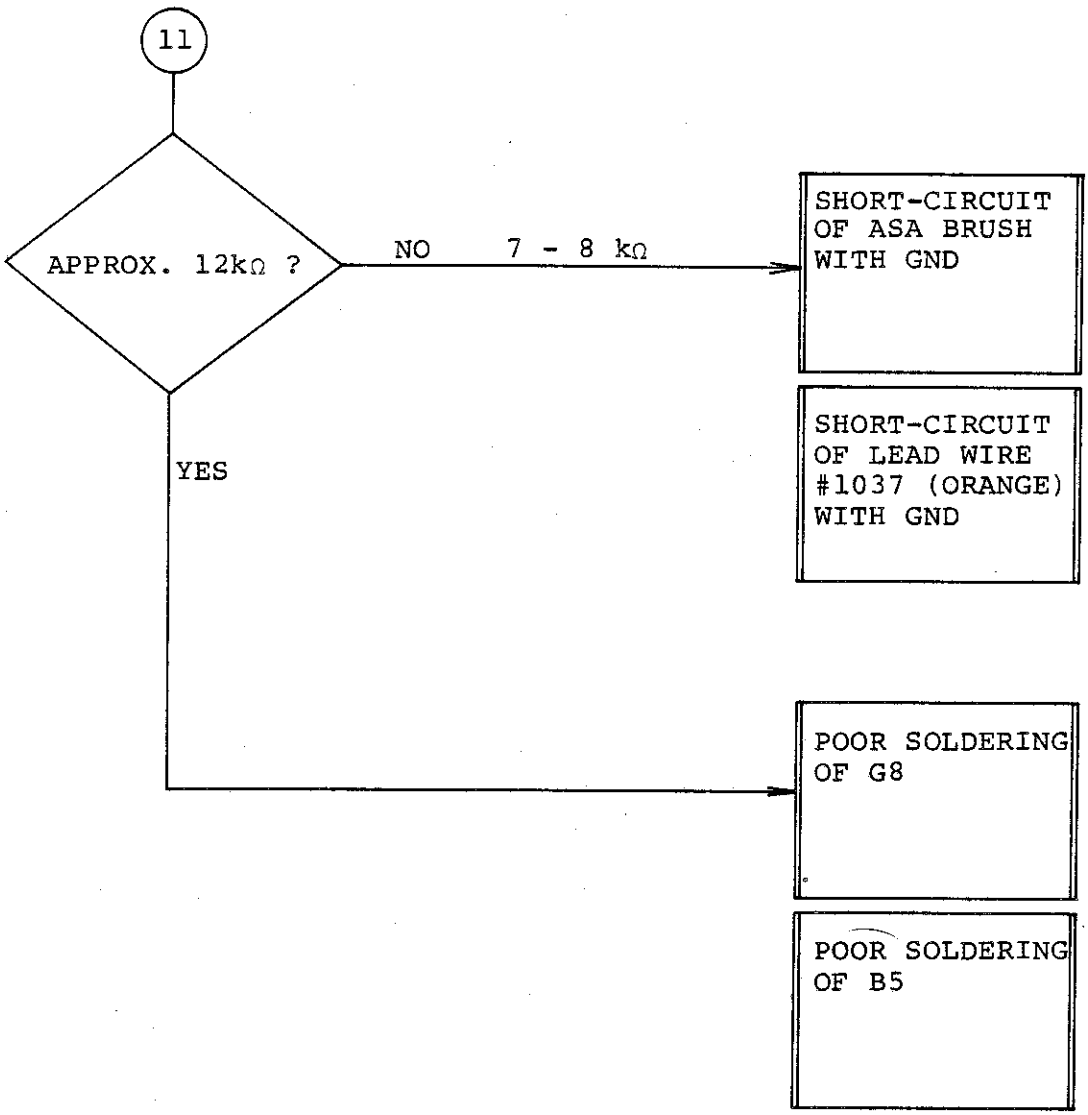

6
SOLDER-BRIDGE BETWEEN B16 AND B17
G7 IS 0.5V OR MORE?
NO
G8 IS APPROX. 0.24V?
NO
SOLDER-BRIDGE BETWEEN G1 AND G2
APPROX. 0.2V
YES
YES
F10 IS APPROX. 0.24V?
NO
SOLDER-BRIDGE BETWEEN G7 AND G8
APPROX. 0.3-0.4V
YES
SOLDER-BRIDGE BETWEEN B5 AND B6
SET MAXIMUM APERTURE.
G5 IS APPROX. 3V?
NO
A22 IS 1V OR MORE?
NO
SOLDER-BRIDGE BETWEEN B7 AND B8
YES
YES
SOLDER-BRIDGE BETWEEN G5 AND G6
7
POOR SOLDERING OF A3
POOR SOLDERING OF B4

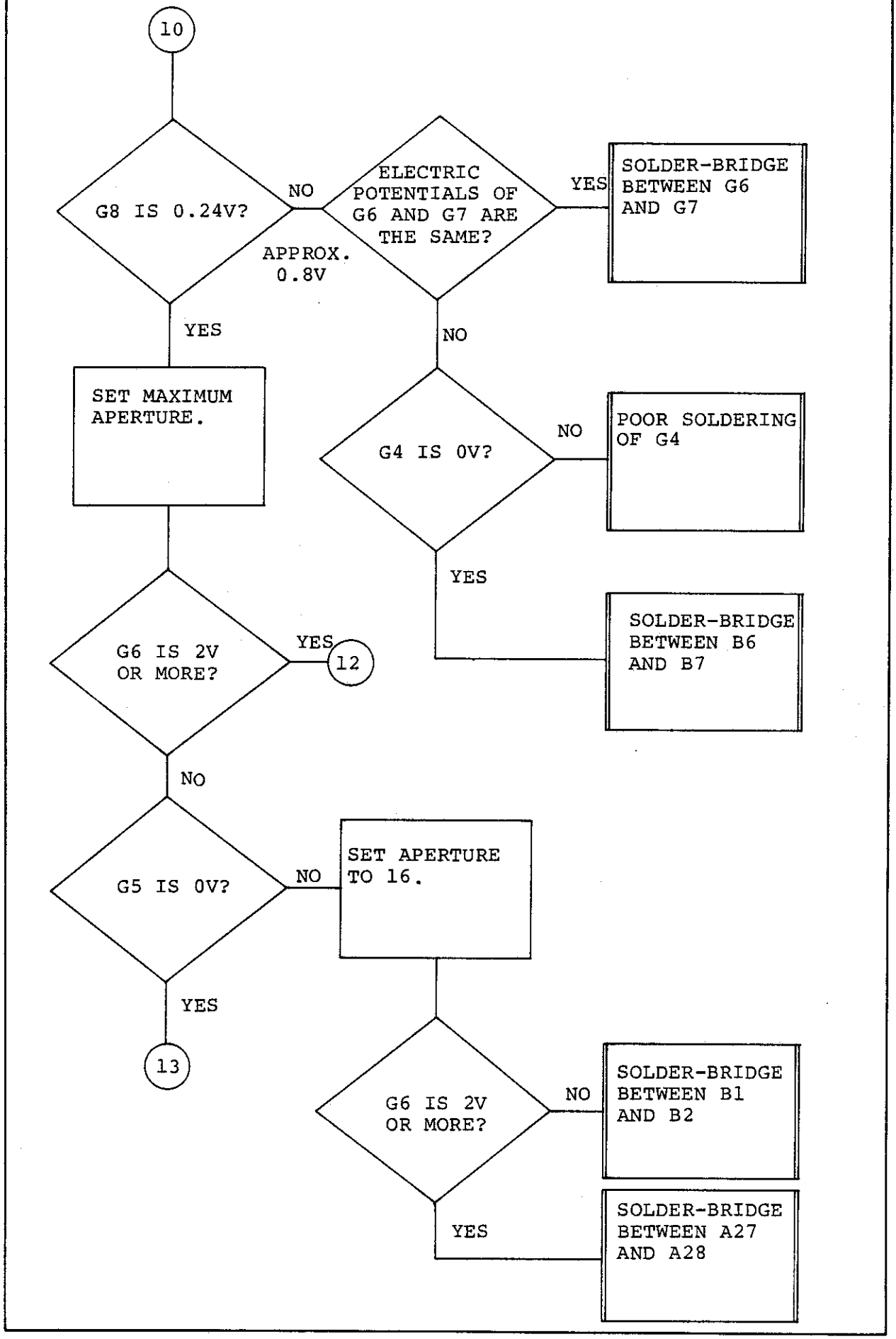

7
A27 IS 3V?
NO
YES
POOR SOLDERING OF G6
POOR SOLDERING OF B7
SOLDER-BRIDGE BETWEEN A26 AND A27

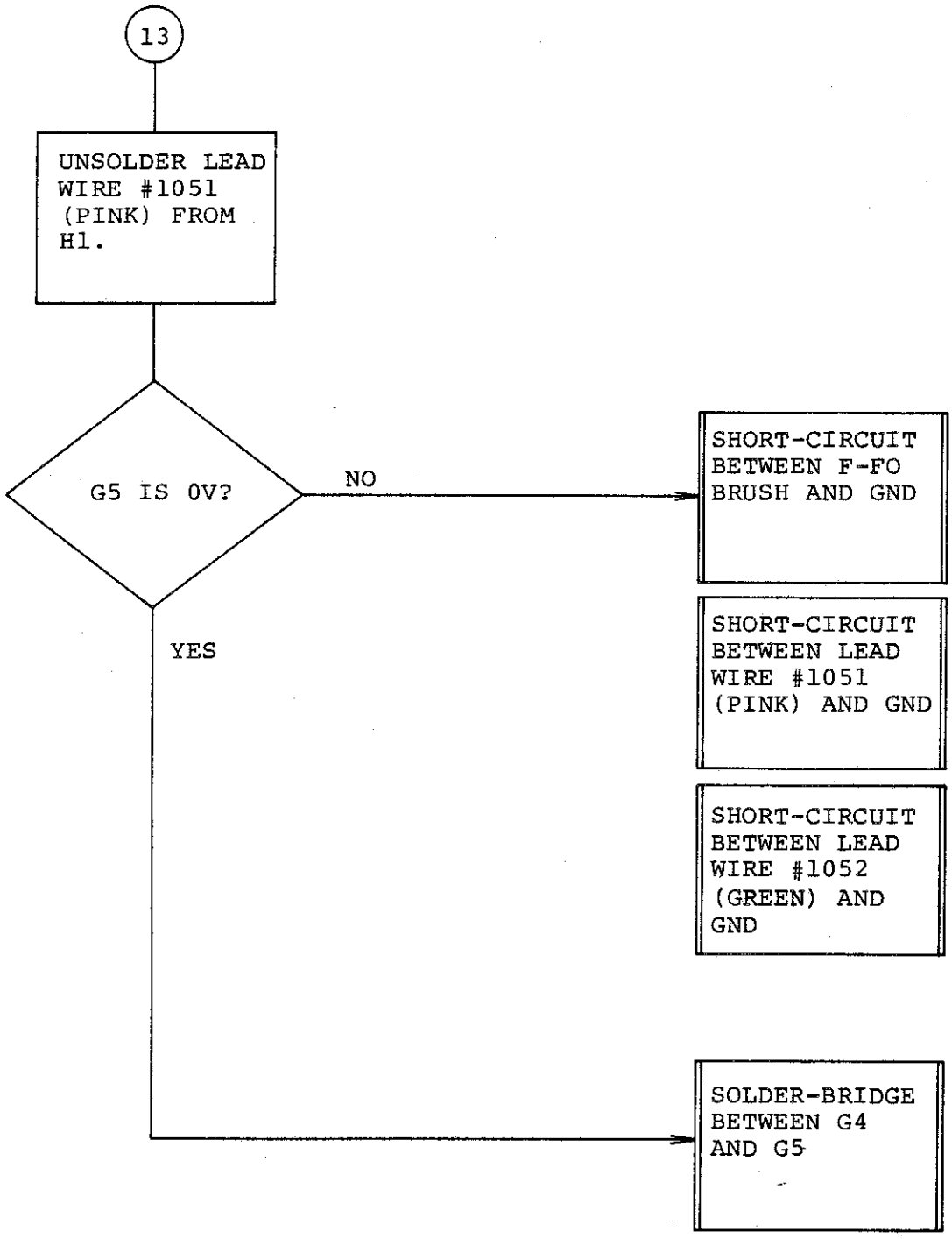

3
METER NEEDLE MOVES SLIGHTLY.
METER NEEDLE FAILS TO MOVE.
SOLDER-BRIDGE BETWEEN B AND B4
G8 IS APPROX. 0.24V?
NO
0V
SHORT-CIRCUIT OF LEAD WIRE #1036 (YELLOW) WITH GND
YES
POOR SOLDERING OF G5
POOR SOLDERING OF B8

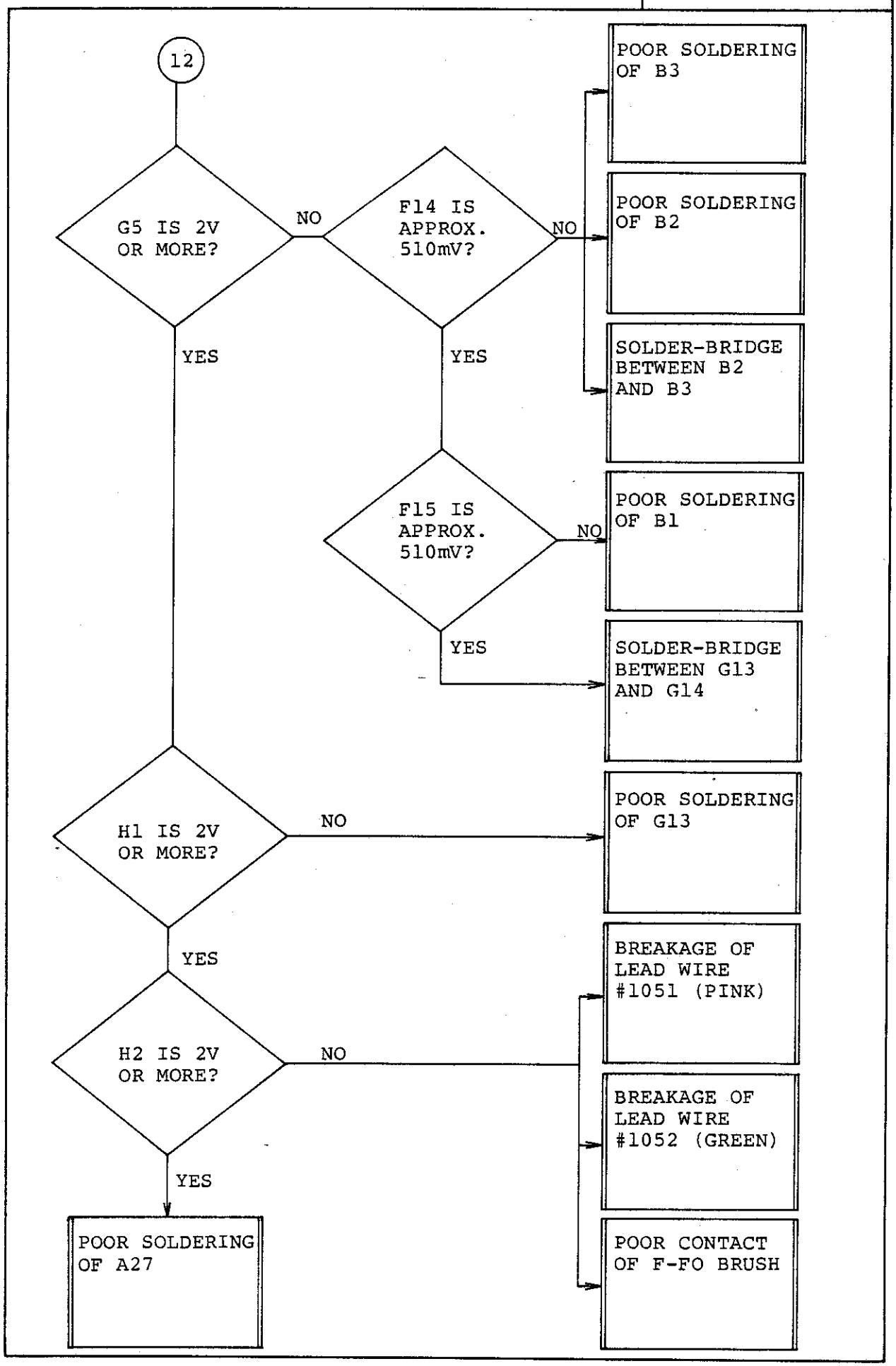

4
9
METER NEEDLE MOVES SLIGHTLY.
METER NEEDLE MOVES ONLY WHEN MEMORY LOCK IS OPERATED.
METER NEEDLE REACTS NOT TO CHANGE OF ASA OR BRIGHTNESS BUT TO THAT OF APERTURE.
SOLDER-BRIDGE BETWEEN A2 AND A3
POOR SOLDERING OF P13
POOR SOLDERING OF A24
F3 IS 2V OR MORE?
NO
APPROX. 1.7V
SOLDER-BRIDGE BETWEEN A23 AND A24
YES
SOLDER-BRIDGE BETWEEN A24 AND A25

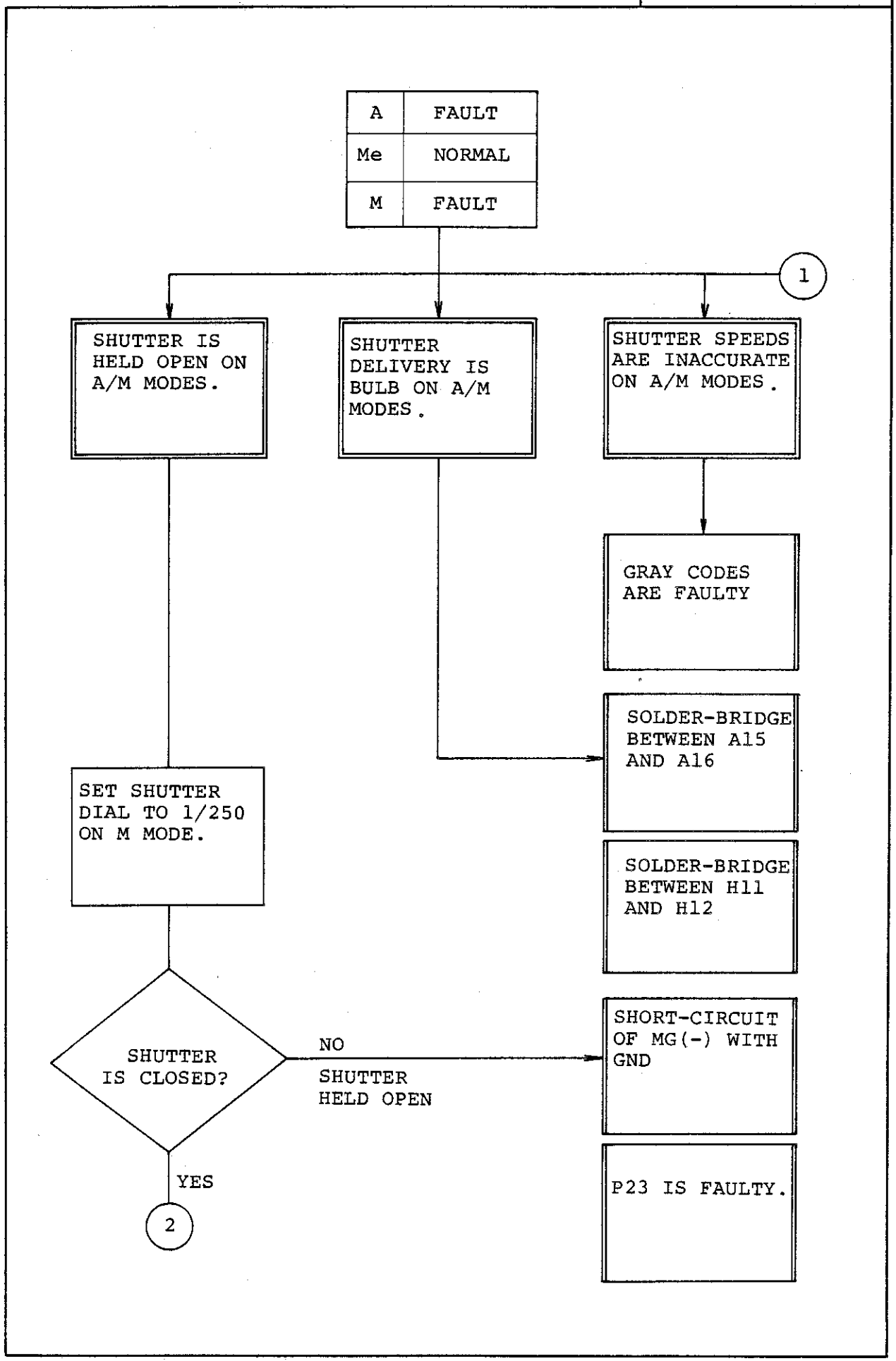

9
METER NEEDLE FAILS TO MOVE.
G8 IS 0.2V OR MORE?
YES
10
NO
0V
F10 IS 0V?
NO
MEASURE CONDUCTIVITY BETWEEN F9 AND F10
FLOATING OF ASA BRUSH
BREAKAGE OF LEAD WIRE #1036 (YELLOW)
APPROX. 6kΩ ?
NO
∞
BREAKAGE OF LEAD WIRE #1037 (ORANGE)
YES
MEASURE CONDUCTIVITY BETWEEN G8 AND GND
YES
MEASURE CONDUCTIVITY BETWEEN G7 AND F9
11
0 Ω ?
NO
POOR SOLDERING OF G7
YES
POOR SOLDERING B6

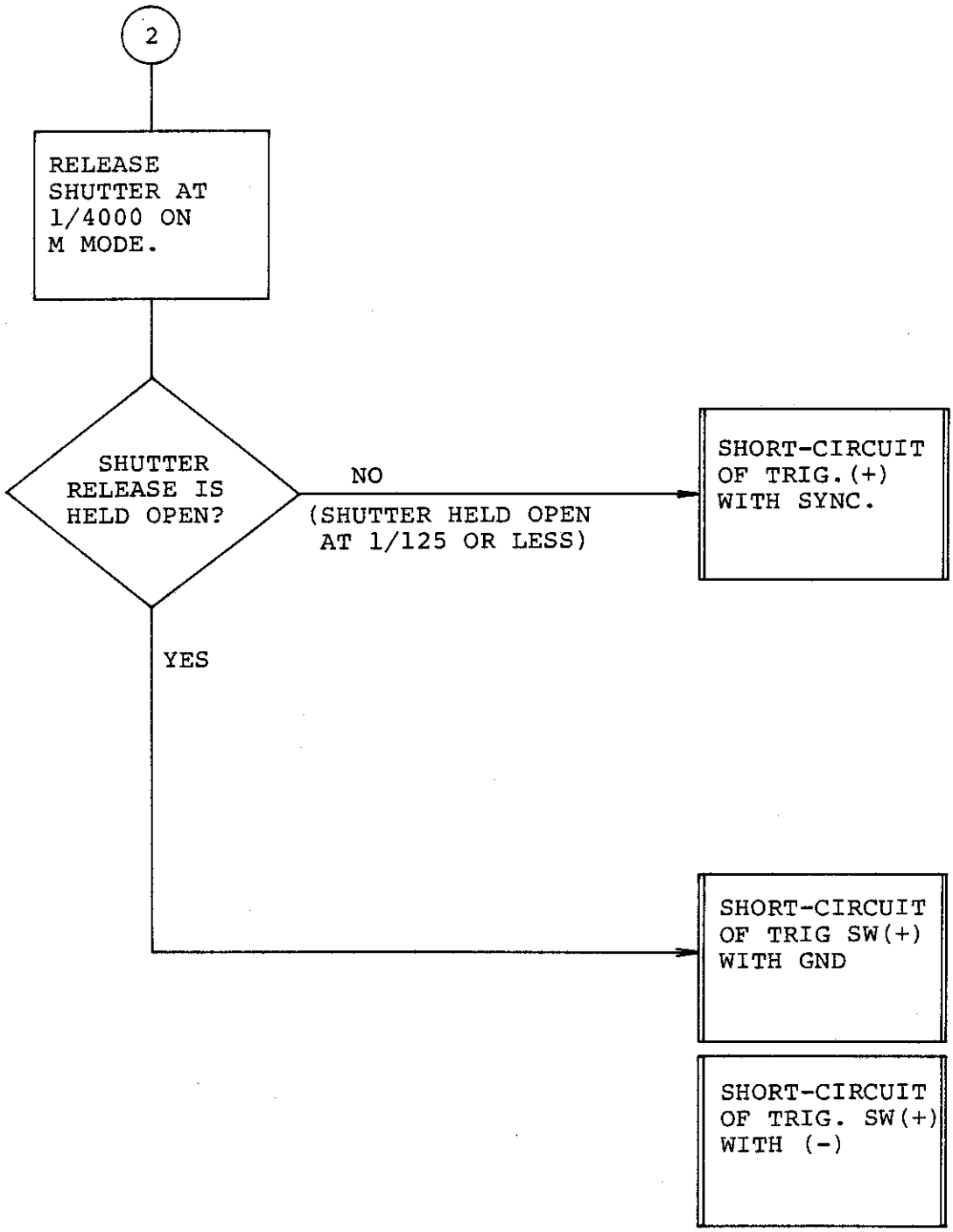

11
APPROX. 12kΩ ?
NO
7 - 8 kΩ
SHORT-CIRCUIT OF ASA BRUSH WITH GND
SHORT-CIRCUIT OF LEAD WIRE #1037 (ORANGE) WITH GND
YES
POOR SOLDERING OF G8
POOR SOLDERING OF B5

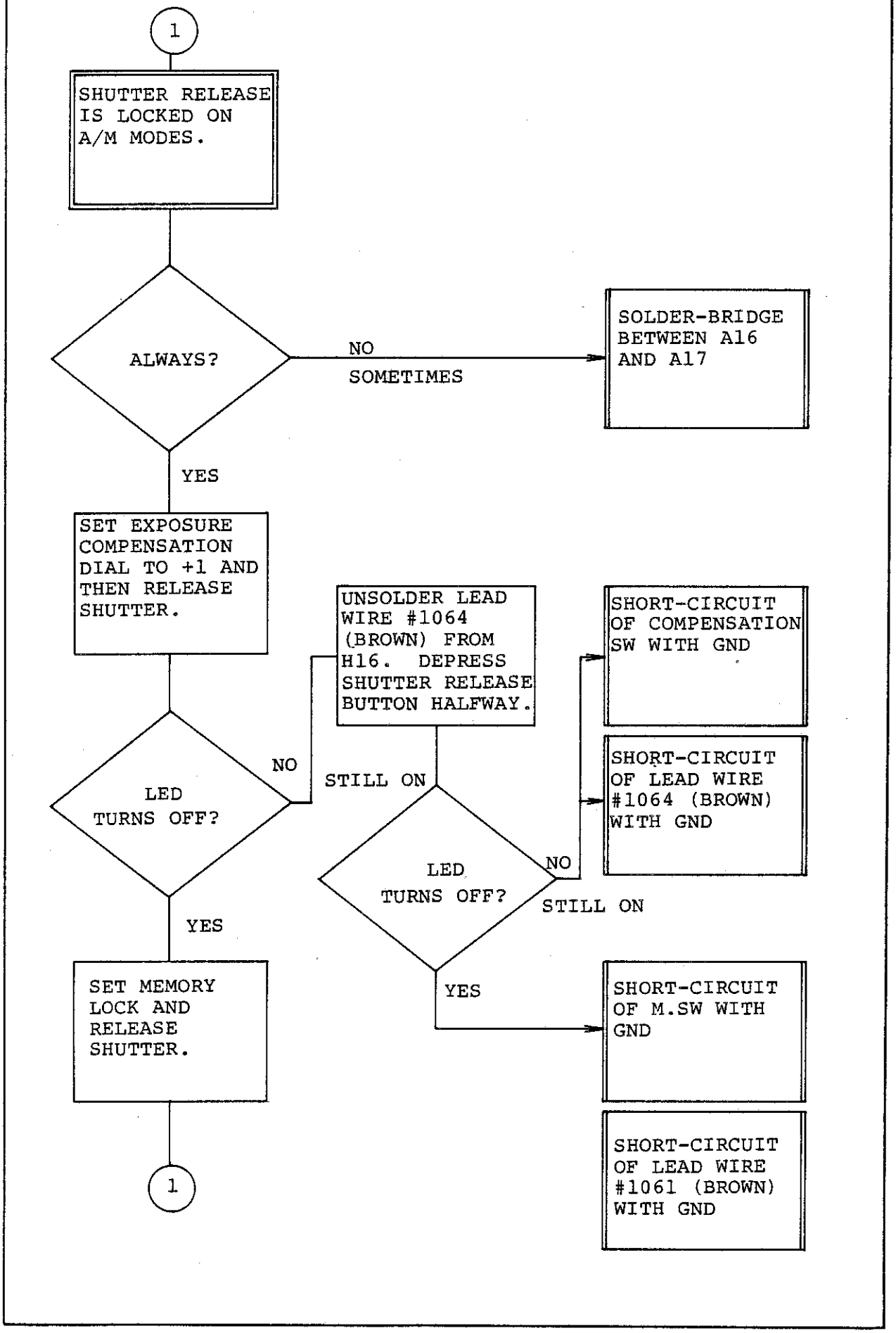

10
G8 IS 0.24V?
NO
APPROX. 0.8V
ELECTRIC POTENTIALS OF G6 AND G7 ARE THE SAME?
YES
SOLDER-BRIDGE BETWEEN G6 AND G7
YES
SET MAXIMUM APERTURE.
NO
G4 IS 0V?
NO
POOR SOLDERING OF G4
YES
SOLDER-BRIDGE BETWEEN B6 AND B7
G6 IS 2V OR MORE?
YES
12
NO
G5 IS 0V?
NO
SET APERTURE TO 16.
YES
13
G6 IS 2V OR MORE?
NO
SOLDER-BRIDGE BETWEEN B1 AND B2
YES
SOLDER-BRIDGE BETWEEN A27 AND A28

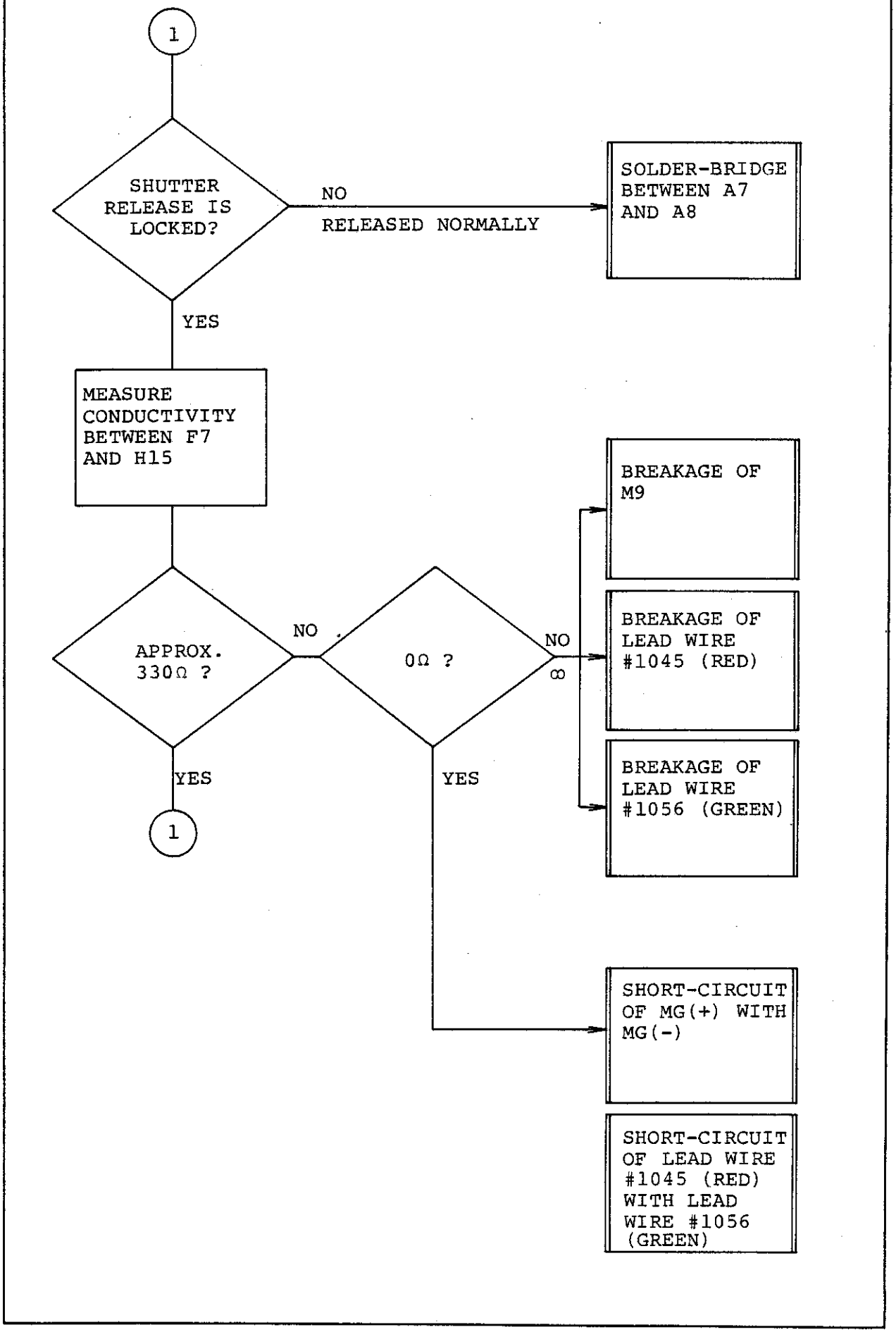

13
UNSOLDER LEAD WIRE #1051 (PINK) FROM H1.
G5 IS 0V?
NO
YES
SHORT-CIRCUIT BETWEEN F-FO BRUSH AND GND
SHORT-CIRCUIT BETWEEN LEAD WIRE #1051 (PINK) AND GND
SHORT-CIRCUIT BETWEEN LEAD WIRE #1052 (GREEN) AND GND
SOLDER-BRIDGE BETWEEN G4 AND G5

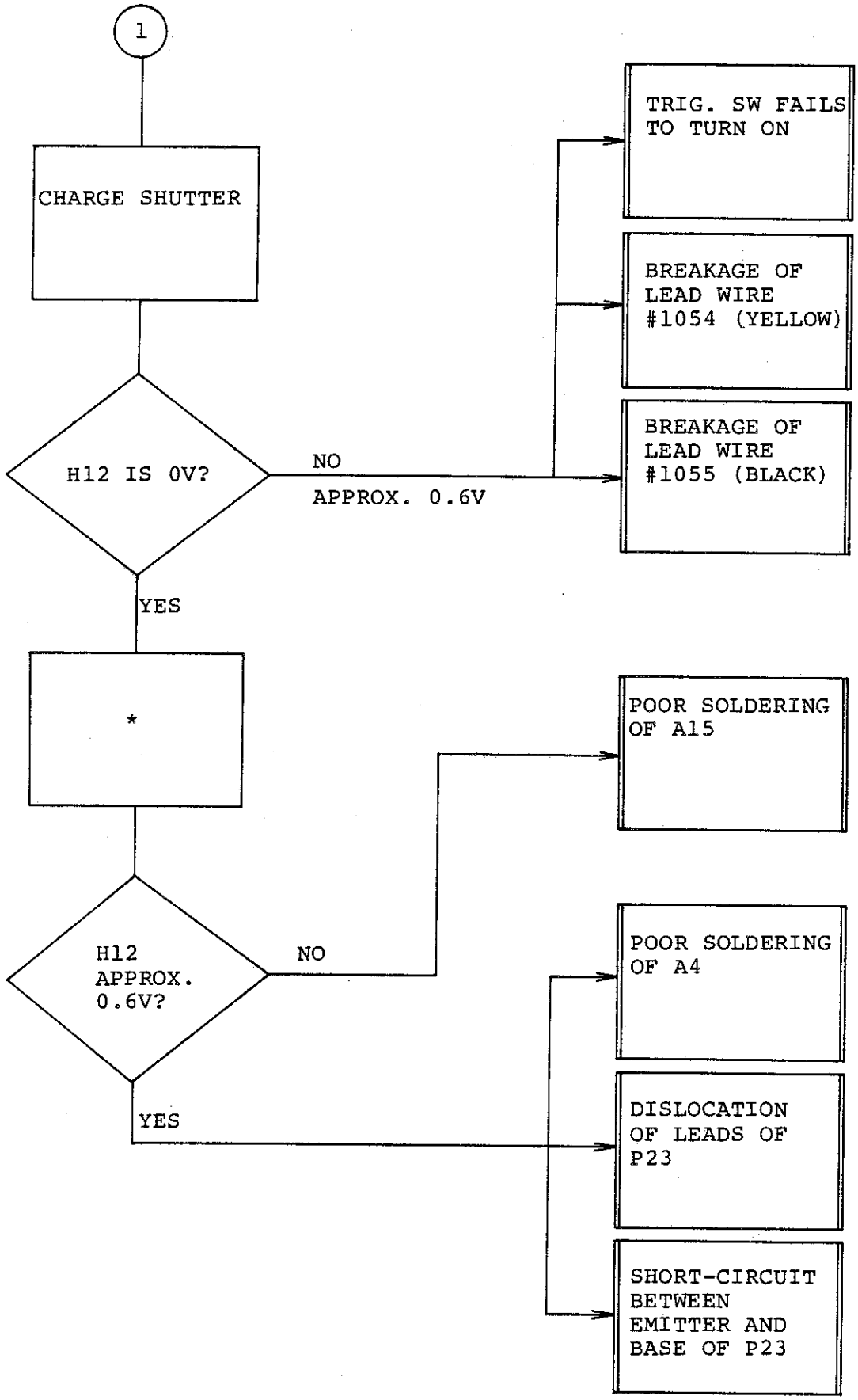

12
G5 IS 2V OR MORE?
NO
F14 IS APPROX. 510mV?
NO
POOR SOLDERING OF B3
POOR SOLDERING OF B2
SOLDER-BRIDGE BETWEEN B2 AND B3
YES
YES
F15 IS APPROX. 510mV?
NO
POOR SOLDERING OF B1
YES
SOLDER-BRIDGE BETWEEN G13 AND G14
H1 IS 2V OR MORE?
NO
POOR SOLDERING OF G13
YES
H2 IS 2V OR MORE?
NO
BREAKAGE OF LEAD WIRE #1051 (PINK)
BREAKAGE OF LEAD WIRE #1052 (GREEN)
POOR CONTACT OF F-FO BRUSH
YES
POOR SOLDERING OF A27


A FAULT
Me NORMAL
M FAULT
1
SHUTTER IS HELD OPEN ON A/M MODES.
SHUTTER DELIVERY IS BULB ON A/M MODES.
SHUTTER SPEEDS ARE INACCURATE ON A/M MODES.
GRAY CODES ARE FAULTY
SOLDER-BRIDGE BETWEEN A15 AND A16
SOLDER-BRIDGE BETWEEN H11 AND H12
SET SHUTTER DIAL TO 1/250 ON M MODE.
SHUTTER IS CLOSED?
NO
SHUTTER HELD OPEN
SHORT-CIRCUIT OF MG(-) WITH GND
YES
2
P23 IS FAULTY.

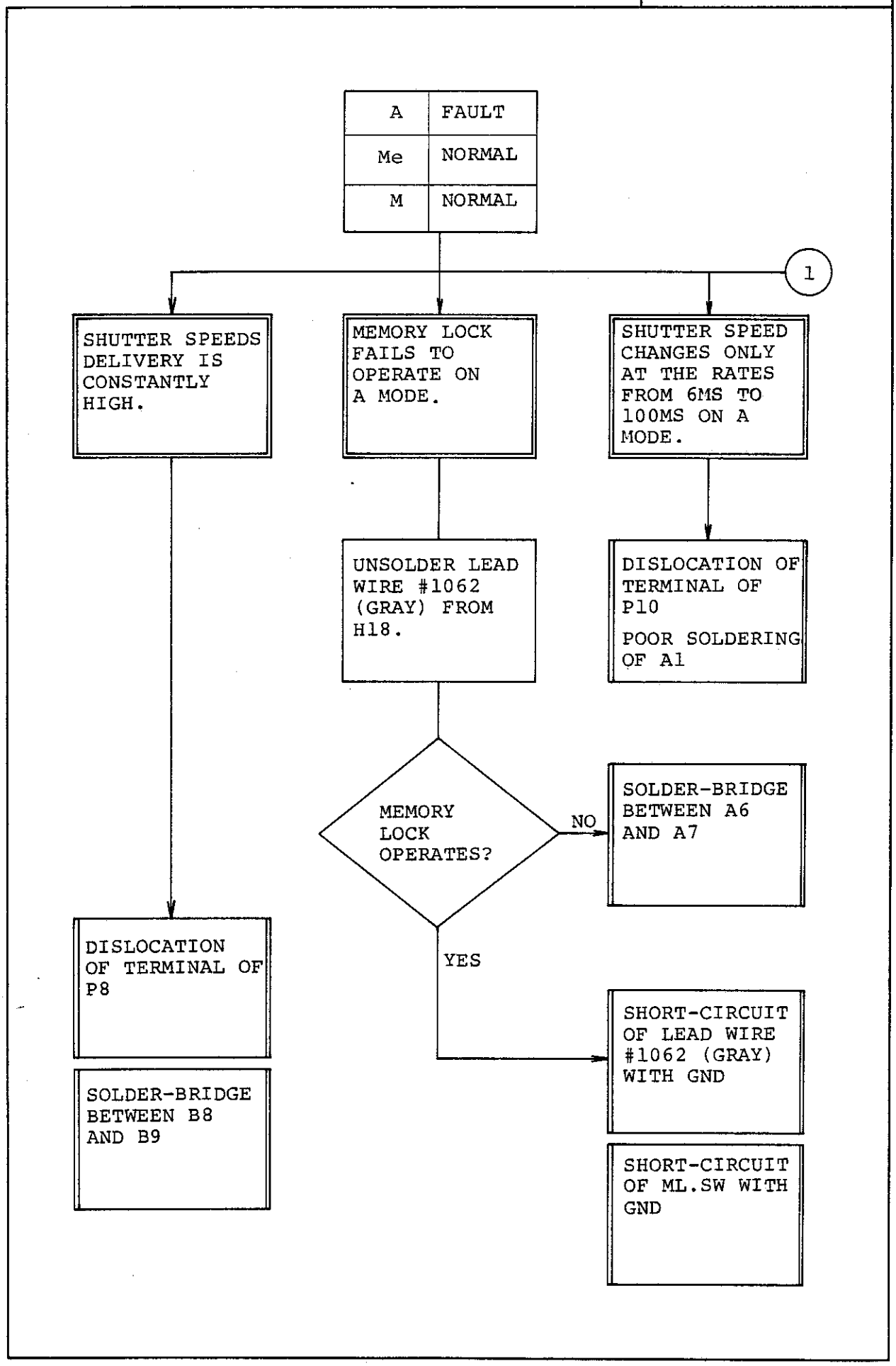

2
RELEASE SHUTTER AT 1/4000 ON M MODE.
SHUTTER RELEASE IS HELD OPEN?
NO
(SHUTTER HELD OPEN AT 1/125 OR LESS)
SHORT-CIRCUIT OF TRIG.(+) WITH SYNC.
YES
SHORT-CIRCUIT OF TRIG SW(+) WITH GND
SHORT-CIRCUIT OF TRIG. SW(+) WITH (-)

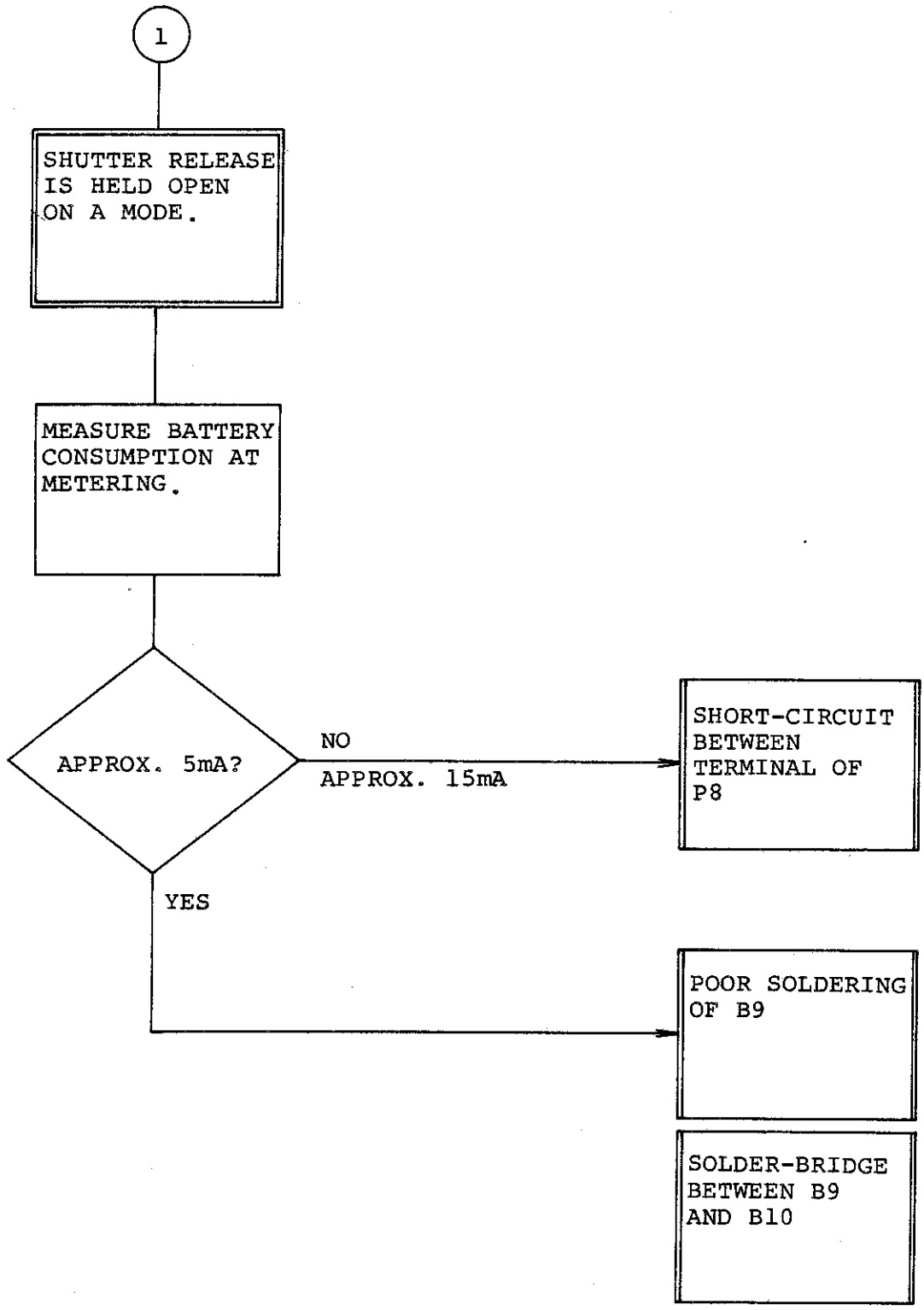

1
SHUTTER RELEASE IS LOCKED ON A/M MODES.
ALWAYS?
NO
SOMETIMES
SOLDER-BRIDGE BETWEEN A16 AND A17
YES
SET EXPOSURE COMPENSATION DIAL TO +1 AND THEN RELEASE SHUTTER.
UNSOLDER LEAD WIRE #1064 (BROWN) FROM H16. DEPRESS SHUTTER RELEASE BUTTON HALFWAY.
SHORT-CIRCUIT OF COMPENSATION SW WITH GND
SHORT-CIRCUIT OF LEAD WIRE #1064 (BROWN) WITH GND
LED TURNS OFF?
NO
STILL ON
LED TURNS OFF?
NO
STILL ON
YES
SET MEMORY LOCK AND RELEASE SHUTTER.
YES
SHORT-CIRCUIT OF M.SW WITH GND
SHORT-CIRCUIT OF LEAD WIRE #1061 (BROWN) WITH GND
1

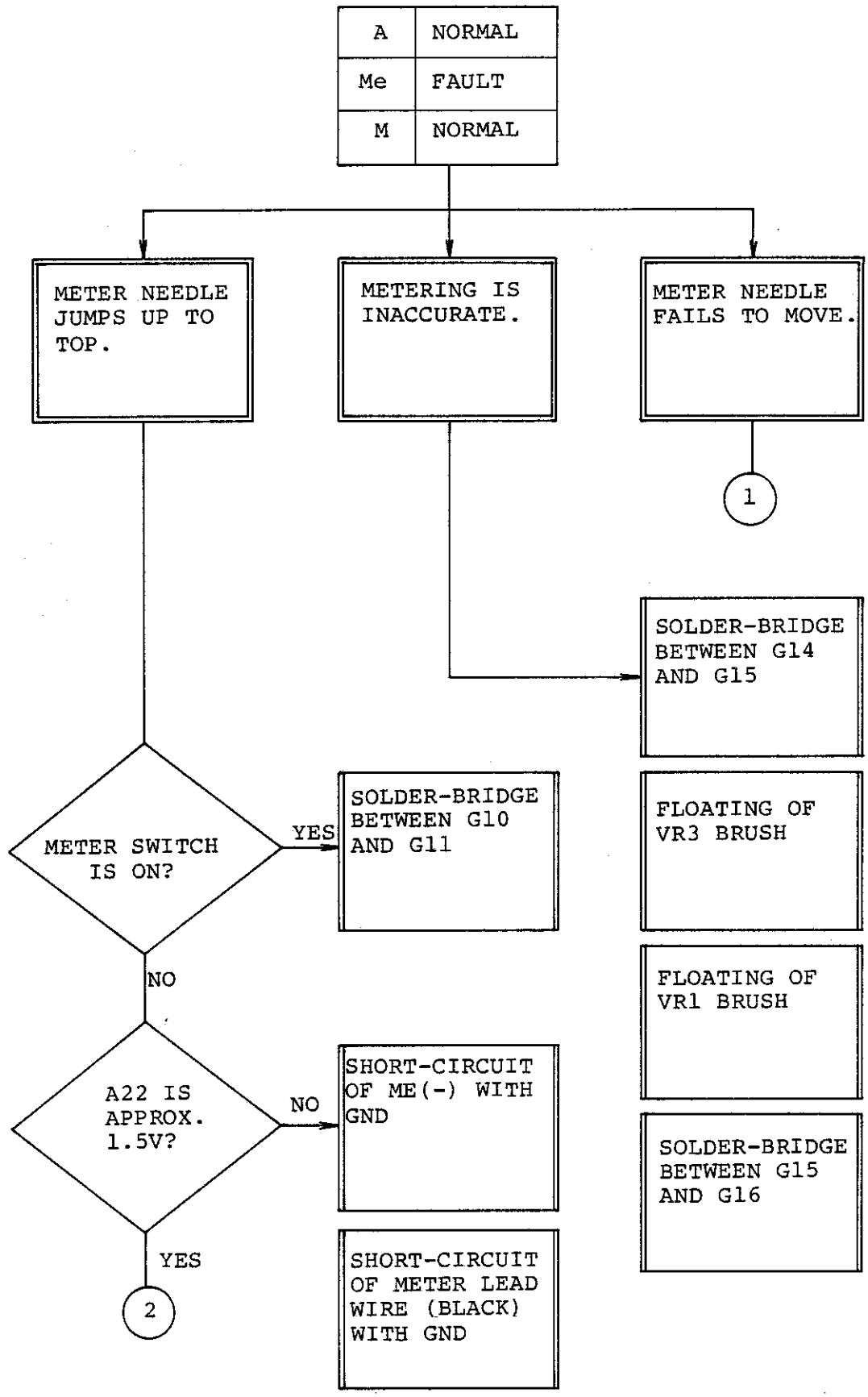

1
SHUTTER RELEASE IS LOCKED?
NO
RELEASED NORMALLY
SOLDER-BRIDGE BETWEEN A7 AND A8
YES
MEASURE CONDUCTIVITY BETWEEN F7 AND H15
APPROX. 330Ω ?
NO
0Ω ?
NO
∞
YES
YES
BREAKAGE OF M9
BREAKAGE OF LEAD WIRE #1045 (RED)
BREAKAGE OF LEAD WIRE #1056 (GREEN)
SHORT-CIRCUIT OF MG(+) WITH MG(-)
SHORT-CIRCUIT OF LEAD WIRE #1045 (RED) WITH LEAD WIRE #1056 (GREEN)
1

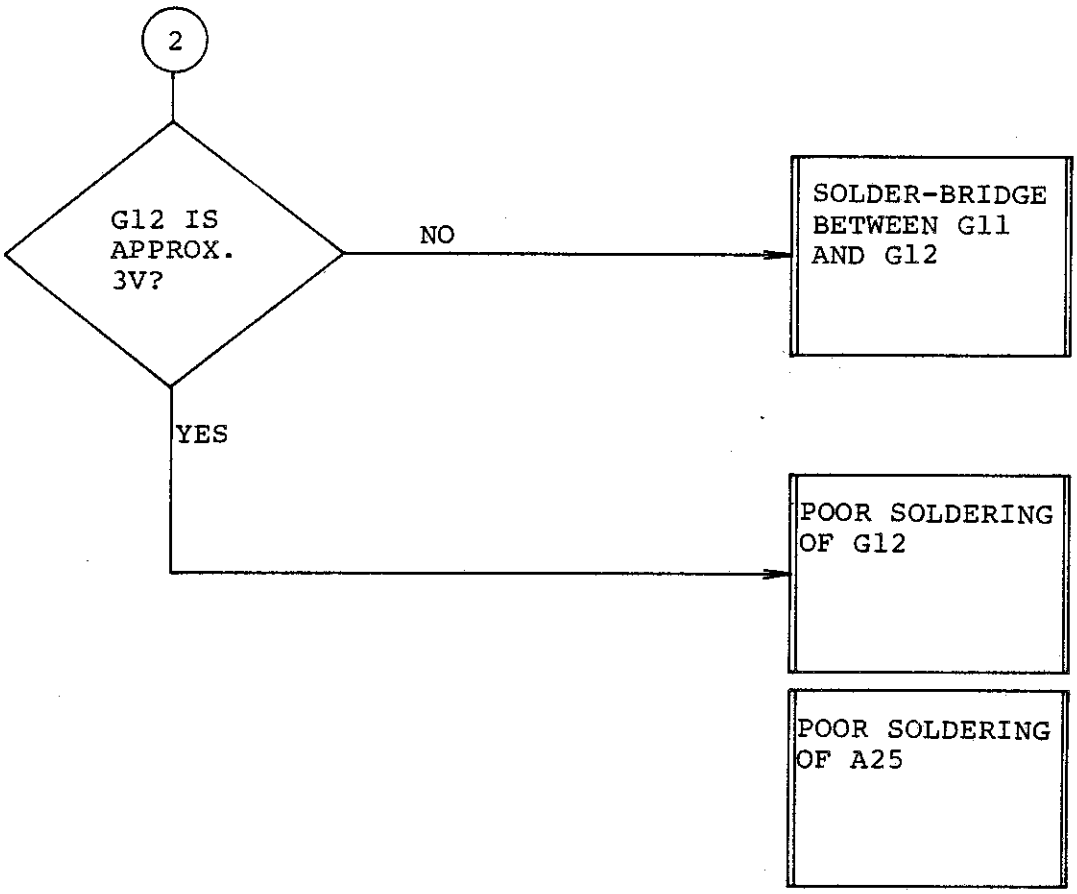


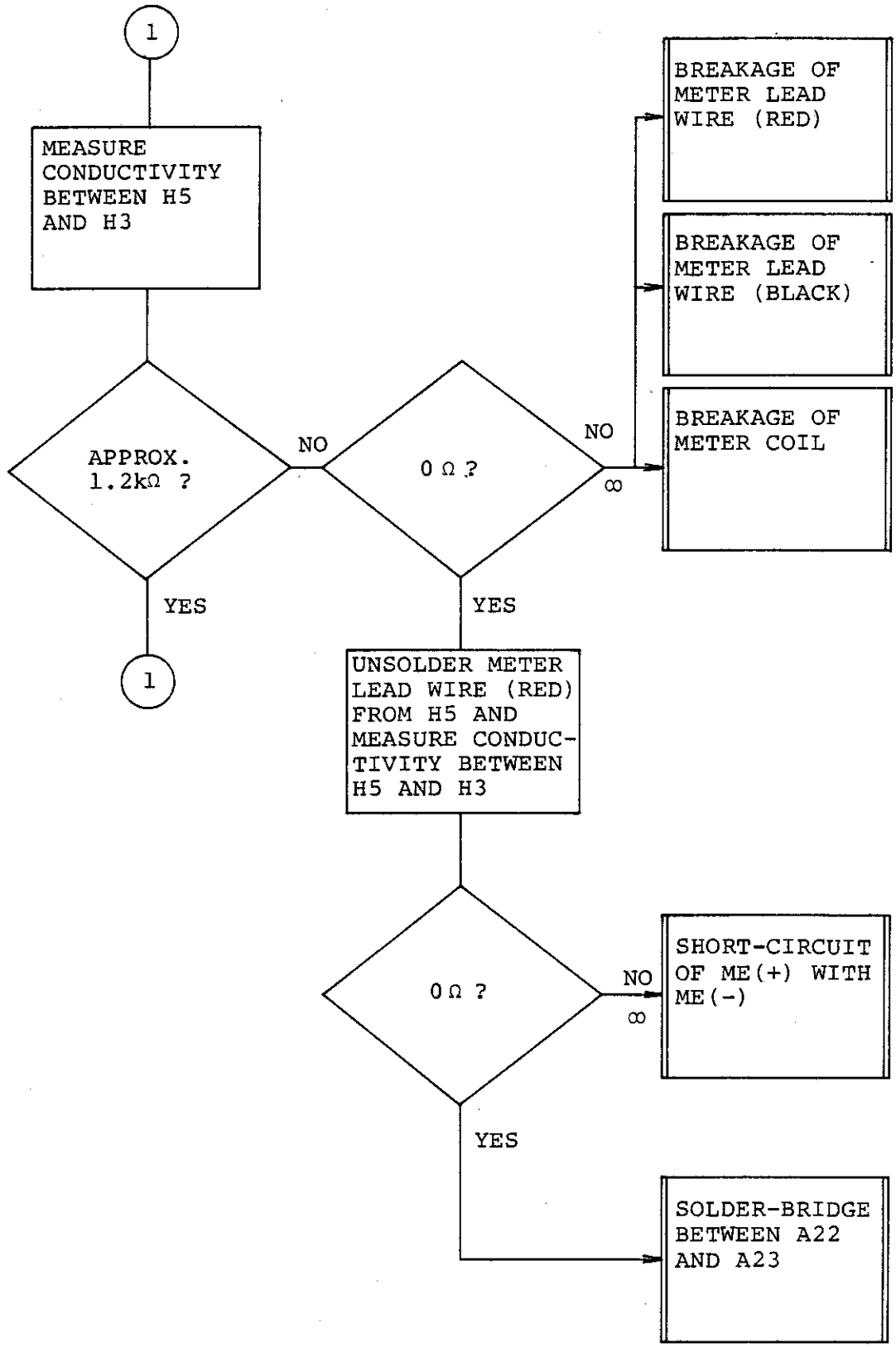
* UNLOCK SHUTTER AFTER DEPRESSING SHUTTER RELEASE BUTTON AND THEN SET SHUTTER DIAL TO A.

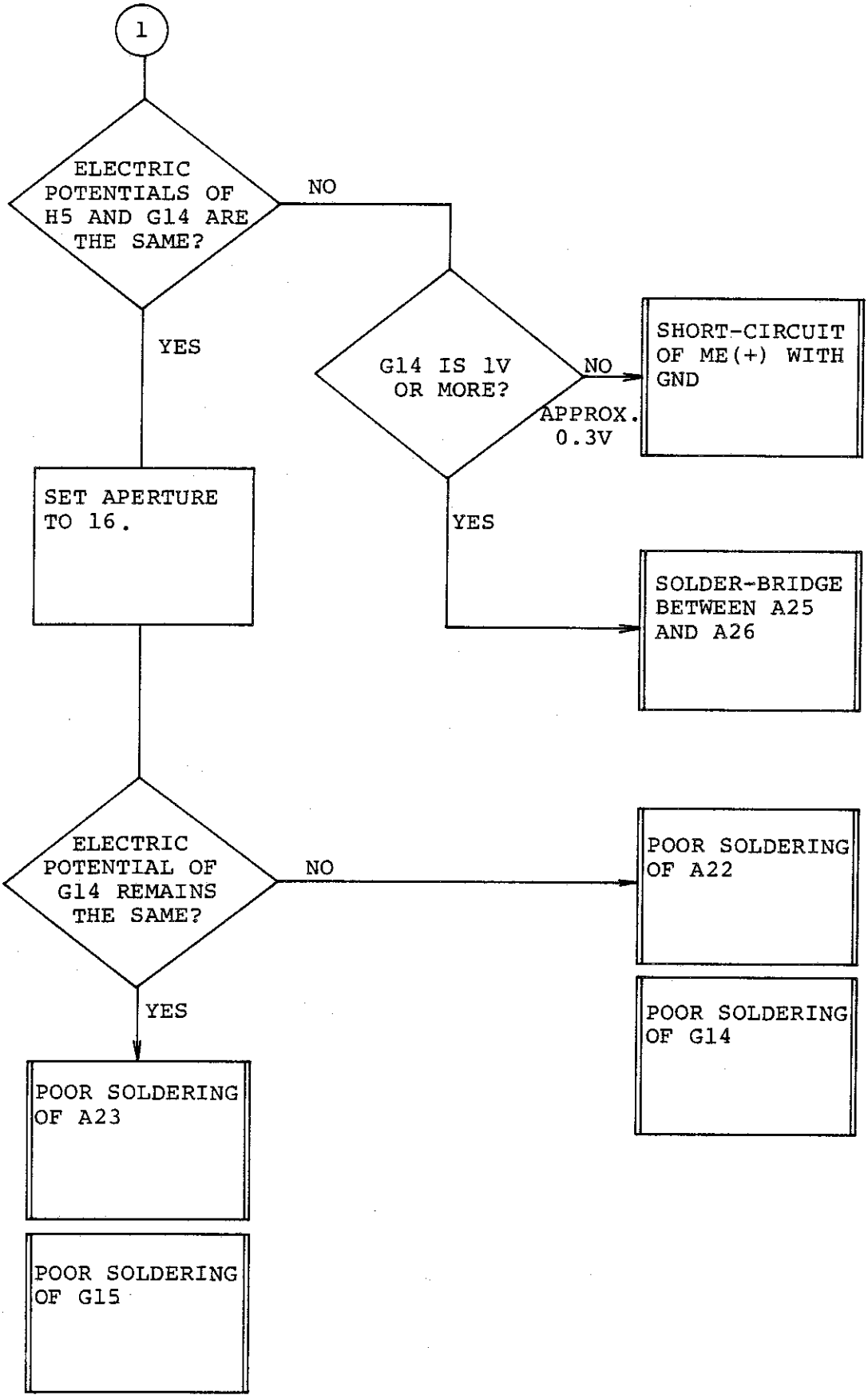

A FAULT
Me NORMAL
M NORMAL
1
SHUTTER SPEEDS DELIVERY IS CONSTANTLY HIGH.
MEMORY LOCK FAILS TO OPERATE ON A MODE.
SHUTTER SPEED CHANGES ONLY AT THE RATES FROM 6MS TO 100MS ON A MODE.
UNSOLDER LEAD WIRE #1062 (GRAY) FROM H18.
DISLOCATION OF TERMINAL OF P10
POOR SOLDERING OF A1
MEMORY LOCK OPERATES?
NO
SOLDER-BRIDGE BETWEEN A6 AND A7
YES
DISLOCATION OF TERMINAL OF P8
SOLDER-BRIDGE BETWEEN B8 AND B9
SHORT-CIRCUIT OF LEAD WIRE #1062 (GRAY) WITH GND
SHORT-CIRCUIT OF ML.SW WITH GND

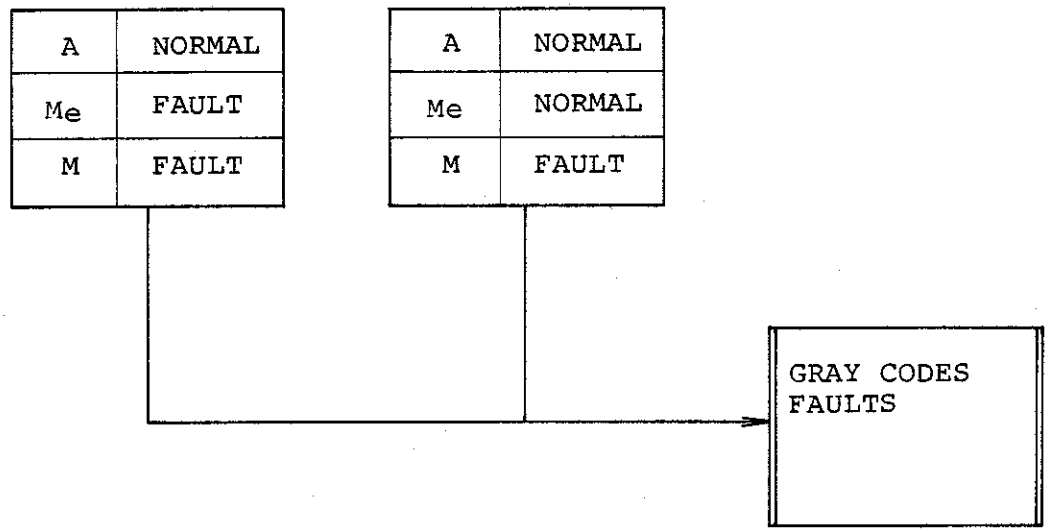

1
SHUTTER RELEASE IS HELD OPEN ON A MODE.
MEASURE BATTERY CONSUMPTION AT METERING.
APPROX. 5mA?
NO
APPROX. 15mA
SHORT-CIRCUIT BETWEEN TERMINAL OF P8
YES
POOR SOLDERING OF B9
SOLDER-BRIDGE BETWEEN B9 AND B10


A NORMAL
Me FAULT
M NORMAL
METER NEEDLE JUMPS UP TO TOP.
METERING IS INACCURATE.
METER NEEDLE FAILS TO MOVE.
1
SOLDER-BRIDGE BETWEEN G14 AND G15
FLOATING OF VR3 BRUSH
FLOATING OF VR1 BRUSH
SOLDER-BRIDGE BETWEEN G15 AND G16
METER SWITCH IS ON?
YES
SOLDER-BRIDGE BETWEEN G10 AND G11
NO
A22 IS APPROX. 1.5V?
NO
SHORT-CIRCUIT OF ME(-) WITH GND
YES
2
SHORT-CIRCUIT OF METER LEAD WIRE (BLACK) WITH GND


2
G12 IS APPROX. 3V?
NO
YES
SOLDER-BRIDGE BETWEEN G11 AND G12
POOR SOLDERING OF G12
POOR SOLDERING OF A25

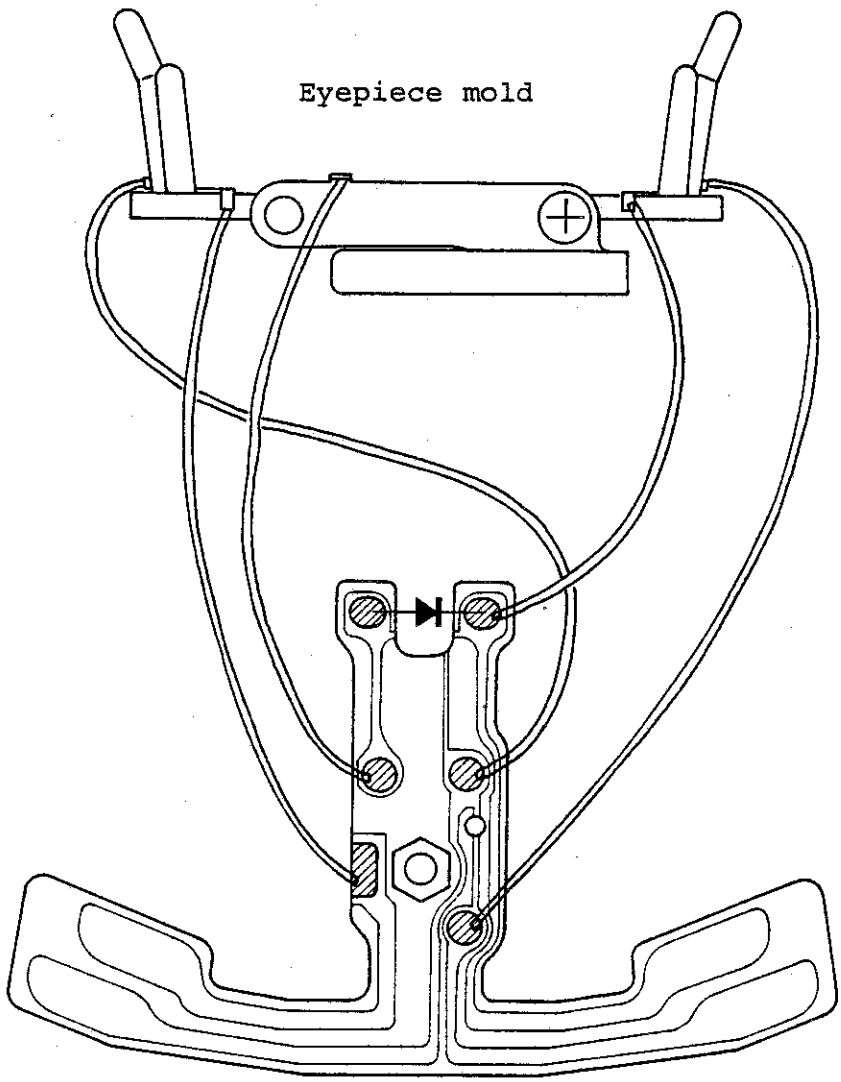

1
MEASURE CONDUCTIVITY BETWEEN H5 AND H3
APPROX. 1.2kΩ ?
NO
YES
0 Ω ?
NO
∞
YES
BREAKAGE OF METER LEAD WIRE (RED)
BREAKAGE OF METER LEAD WIRE (BLACK)
BREAKAGE OF METER COIL
1
UNSOLDER METER LEAD WIRE (RED) FROM H5 AND MEASURE CONDUCTIVITY BETWEEN H5 AND H3
0 Ω ?
NO
∞
YES
SHORT-CIRCUIT OF ME(+) WITH ME(-)
SOLDER-BRIDGE BETWEEN A22 AND A23


1
ELECTRIC POTENTIALS OF H5 AND G14 ARE THE SAME?
NO
YES
G14 IS 1V OR MORE?
NO
APPROX. 0.3V
SHORT-CIRCUIT OF ME(+) WITH GND
YES
SET APERTURE TO 16.
SOLDER-BRIDGE BETWEEN A25 AND A26
ELECTRIC POTENTIAL OF G14 REMAINS THE SAME?
NO
POOR SOLDERING OF A22
POOR SOLDERING OF G14
YES
POOR SOLDERING OF A23
POOR SOLDERING OF G15


A
NORMAL
Me
FAULT
M
FAULT
A
NORMAL
Me
NORMAL
M
FAULT
GRAY CODES
FAULTS

WIRING FOR TTL MODE CHECKING

In order to use the Speed-light SB-15 or other TTL flash units, connect five wires as below and one from top cover to eyelet for ground.



FPC

GRAY CODE FAULTS (2)

VOLTAGE OF GRAYCODES	CODES	1	(1)	0
	V, Y	0.7-0.8V	0V	0V
	W, X, Z	0.6V	0V	0V

....Meter
....Shutter

BLANK ...NORMAL
250 ...FAULTY SPEED

CAUSE \ SHUTTER SPEED	A	4000	2000	1000	500	250	125	60	30	15	8	4	2	1 S	2 S	4 S	8 S	B M 250
V (A 9 H 20 H 31)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
W (A 10 H 19 H 30)	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1	1	(1)
X (A 11 H 21 H 29)	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	(1)
Y (A 12 H 22 H 28)	1	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	0
Z (A 13 H 23 H 27)	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	1	0	0
V Open																		MOVE
																2 S	250	2
W Open																		
					1000	2000	4000	A	250	2 S	1 S	2						
X Open																		
	250	2 S	1 S	2	4	8	15	30										
Y Open																		MOVE
			4000	A	60	125					15	30	250	2 S				8 S
Z Open																		
	4000			2000	250			125	15			8	1 S				4 S	
V-GND SHORT-CIRCUIT				NOT MOVE								NOT MOVE						
				LOCK								LOCK						
W-GND SHORT-CIRCUIT																		
	60	125	250	500									4	8	15	15	30	
X-GND SHORT-CIRCUIT																		
									60	125	250	500	1000	2000	4000	4000	A	
Y-GND SHORT-CIRCUIT																NOT MOVE		
	1000	2000					250	500	4	8					1	LOCK		
Z-GND SHORT-CIRCUIT																		
		A	1000			500	60			30	4			2	250	8 S		

GRAY CODES FAULTS (2)

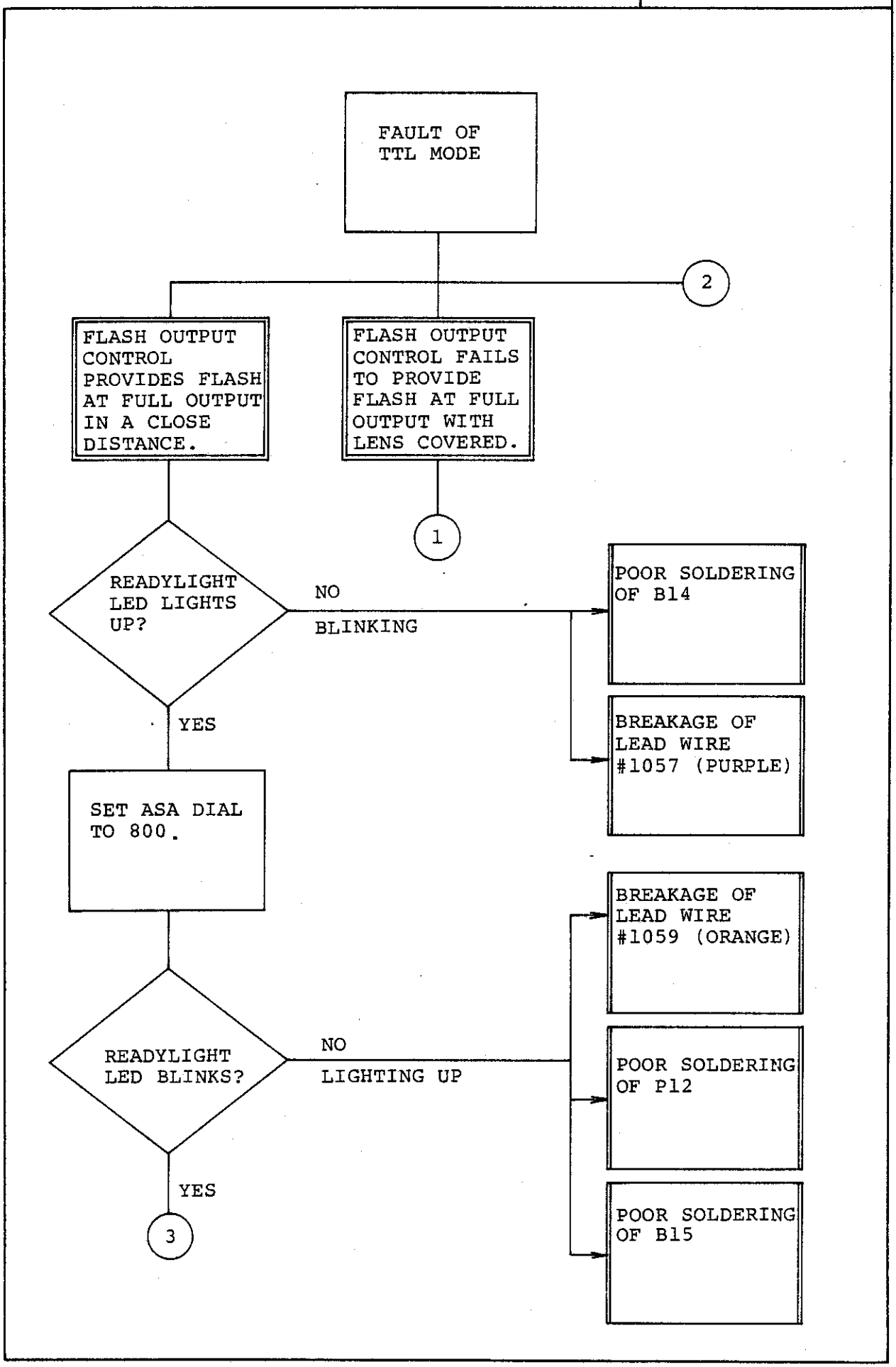
VOLTAGES OF GRAY CODES	CODES	1	(1)	0
	V, Y	0.7-0.8V	0V	0V
	W, X, Z	0.6V	0V	0V

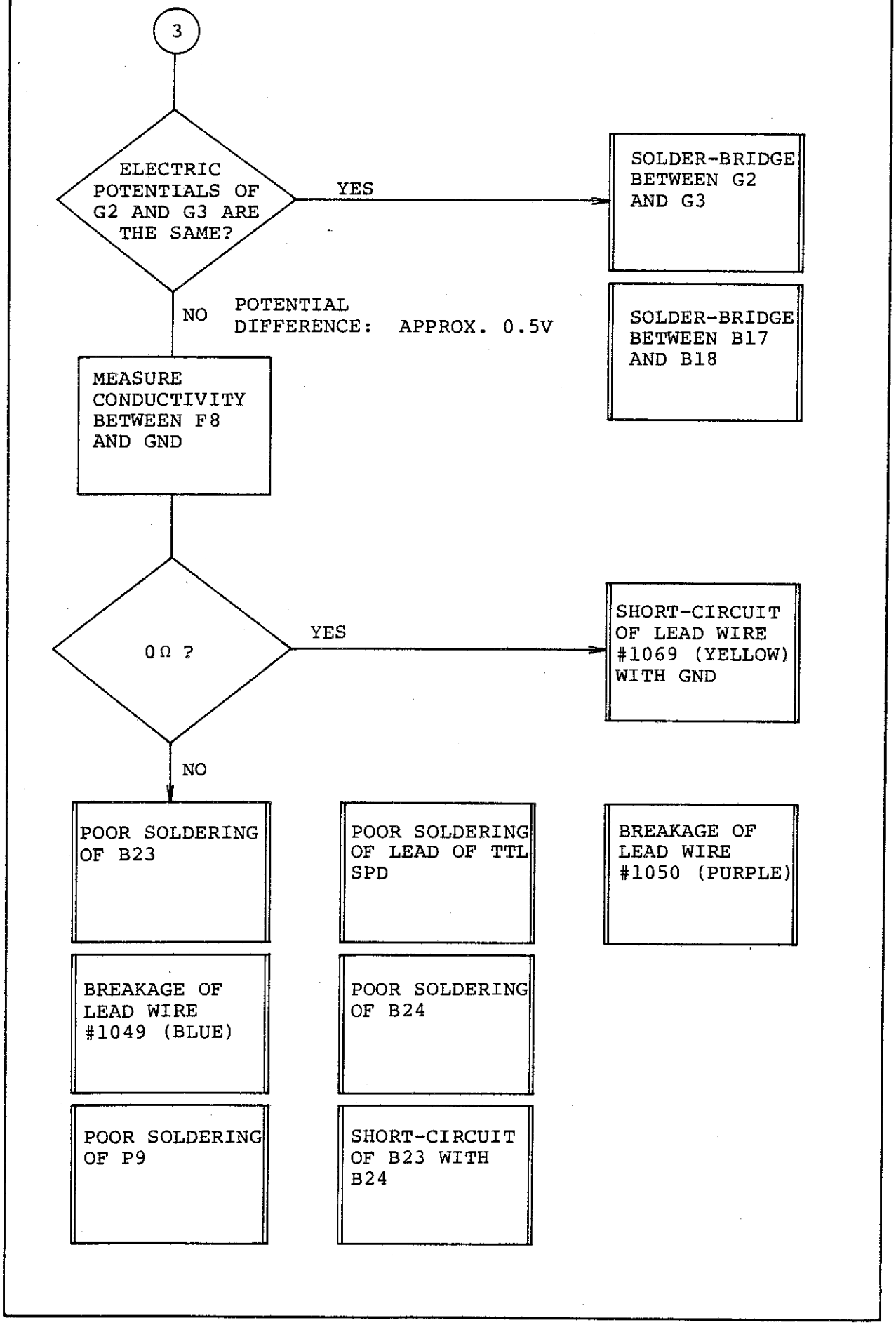
.....Meter
.....Shutter

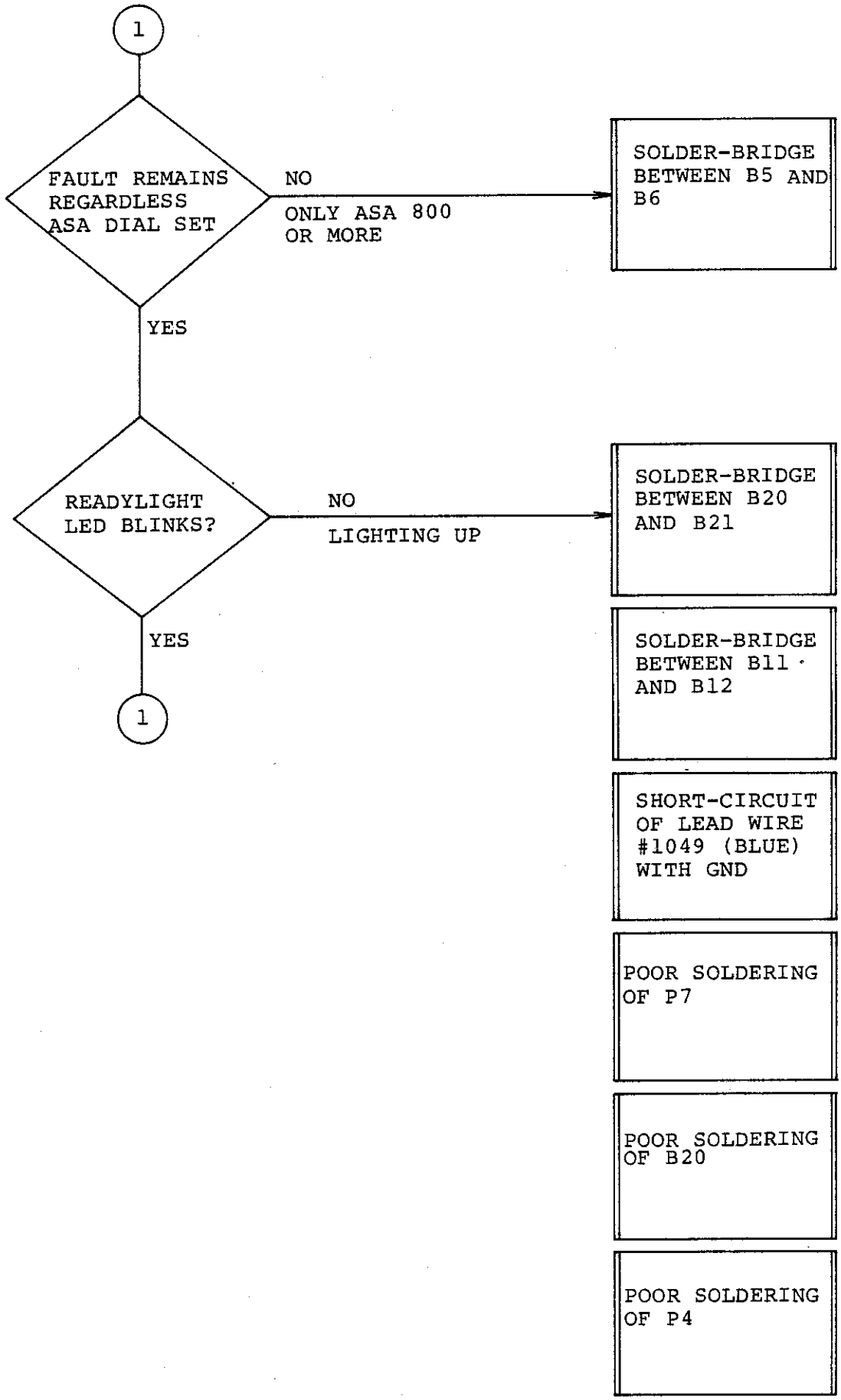
Blank .... NORMAL
250 .... FAULTY

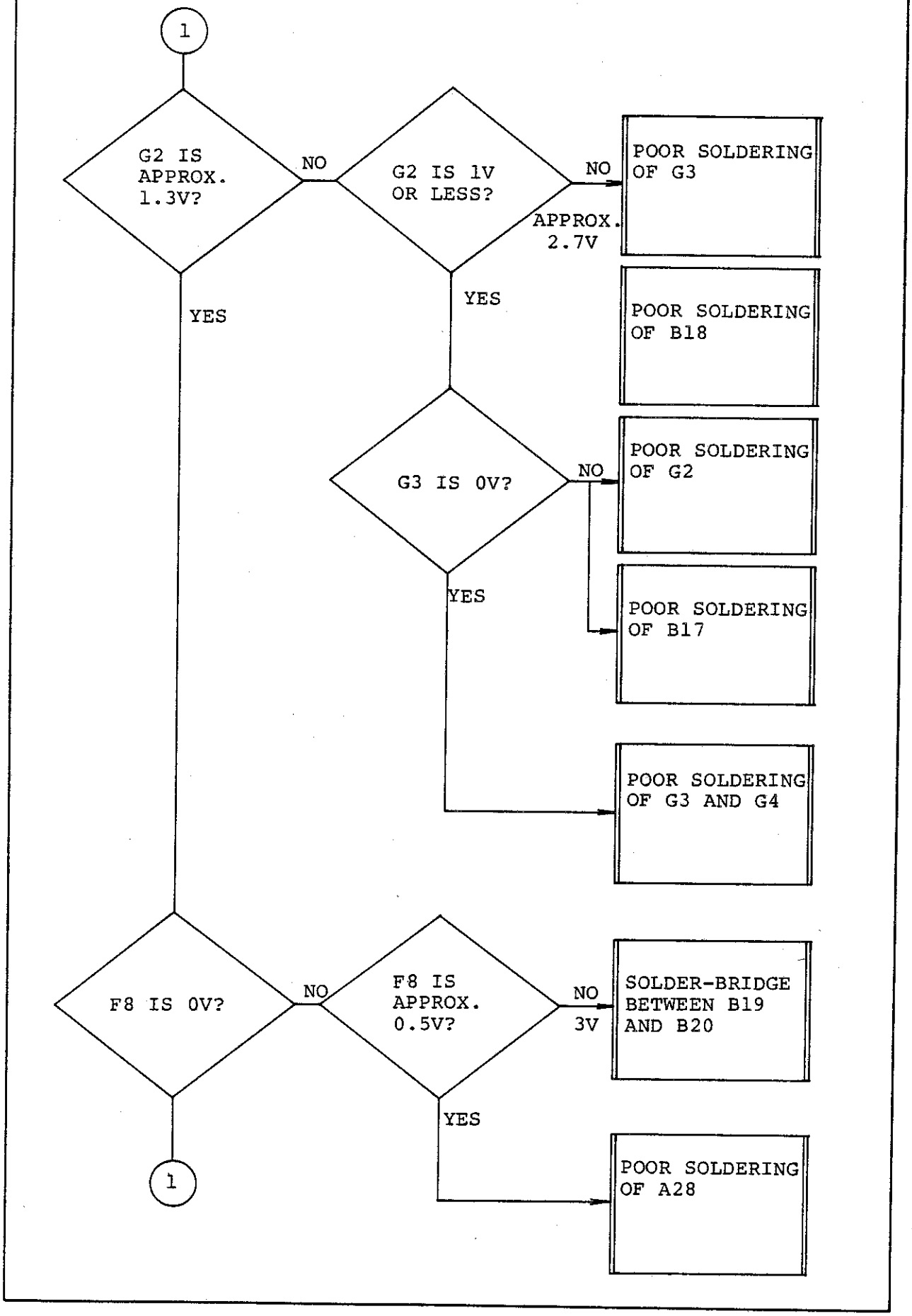
CAUSE \ SHUTTER SPEED	A	4000	2000	1000	500	250	125	60	30	15	8	4	2	1 S	2 S	4 S	8 S	B M 250
V (A 9 H 20 H 31)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
W (A 10 H 19 H 30)	1	1	1	1	0	0	0	0	0	0	0	0	1	1	1	1	1	(1)
X (A 11 H 21 H 29)	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	(1)
Y (A 12 H 22 H 28)	1	1	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	0
Z (A 13 H 23 H 27)	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1	1	0	0
V-W SHORT-CIRCUIT					NOT MOVE								NOT MOVE					
					LOCK								LOCK			15	30	
V-X SHORT-CIRCUIT					NOT MOVE								NOT MOVE					
					LOCK								LOCK			3000	A	
W-X SHORT-CIRCUIT	60	125	250	500					60	125	250	500						
X-Y SHORT-CIRCUIT	1000	2000					250	500			250	500	1000	2000		NOT MOVE LOCK		
X-Z SHORT-CIRCUIT		A	1000			500	60		60			500	1000				A	
Y-Z SHORT-CIRCUIT	1000		1000			500		500	4		4			2		NOT MOVE LOCK		
A8-V SHORT-CIRCUIT				NOT MOVE								NOT MOVE				LOCK		
A14-Z SHORT-CIRCUIT		250	250															
H25-Y SHORT-CIRCUIT	1000	2000					250	500	4	8					1	B~M B	B	APPROX. 1.5SEC.
H26(GND) Open																		MOVE
								4	7	2 S								

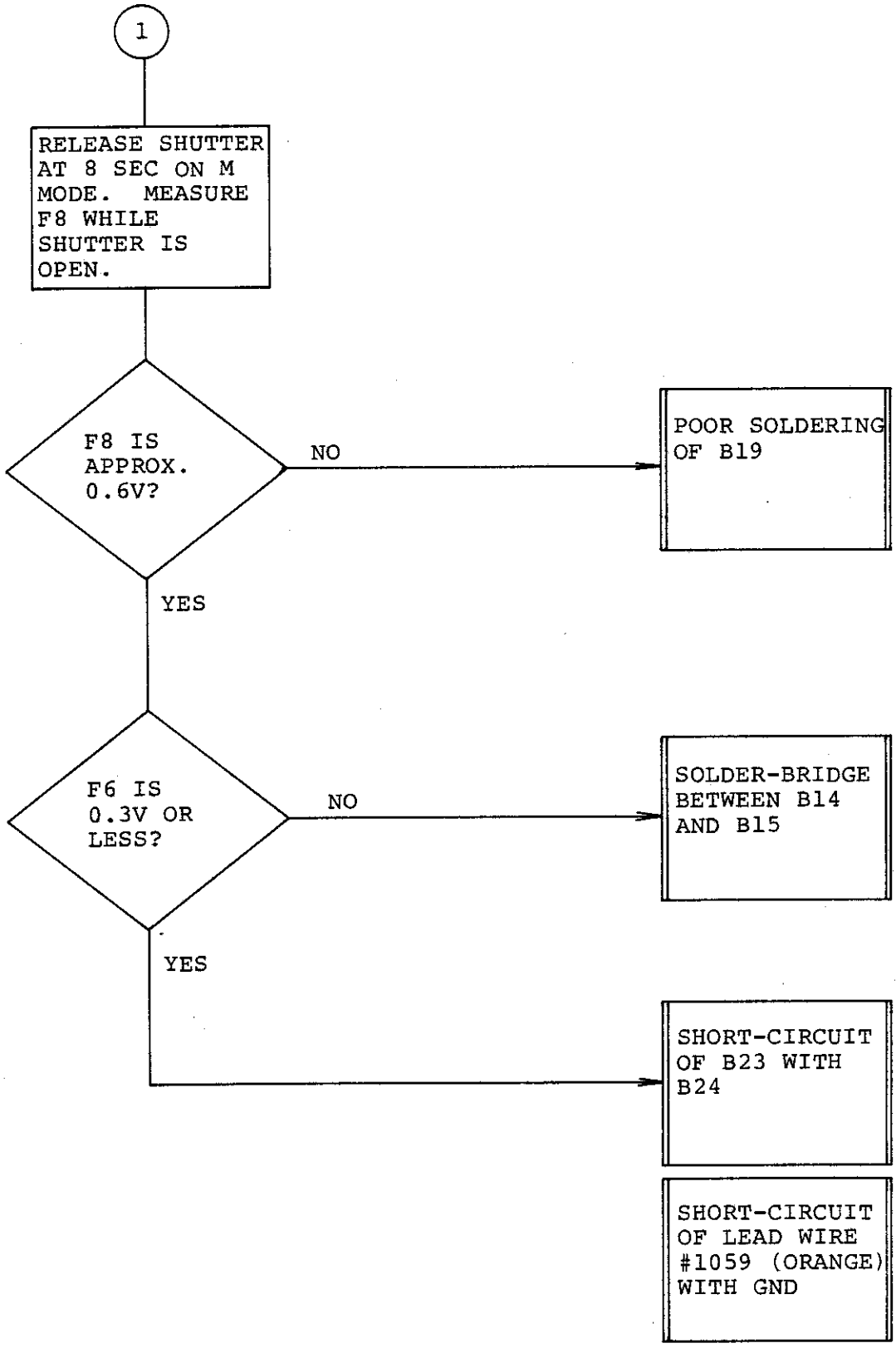
APPROX. 3SEC.

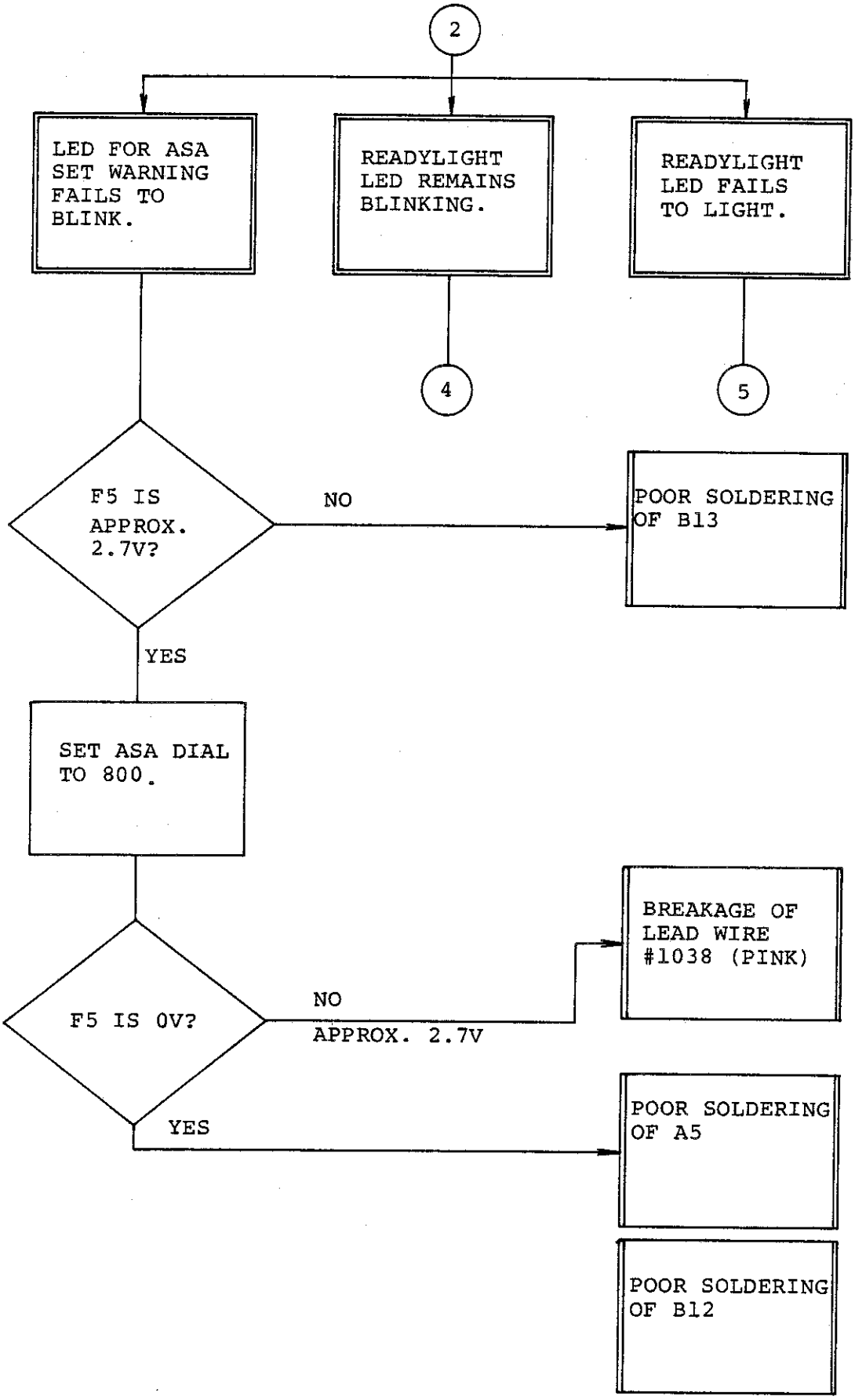

FAULT OF TTL MODE
2
FLASH OUTPUT CONTROL PROVIDES FLASH AT FULL OUTPUT IN A CLOSE DISTANCE.
FLASH OUTPUT CONTROL FAILS TO PROVIDE FLASH AT FULL OUTPUT WITH LENS COVERED.
1
READYLIGHT LED LIGHTS UP?
NO
BLINKING
POOR SOLDERING OF B14
BREAKAGE OF LEAD WIRE #1057 (PURPLE)
YES
SET ASA DIAL TO 800.
BREAKAGE OF LEAD WIRE #1059 (ORANGE)
READYLIGHT LED BLINKS?
NO
LIGHTING UP
POOR SOLDERING OF P12
YES
POOR SOLDERING OF B15
3

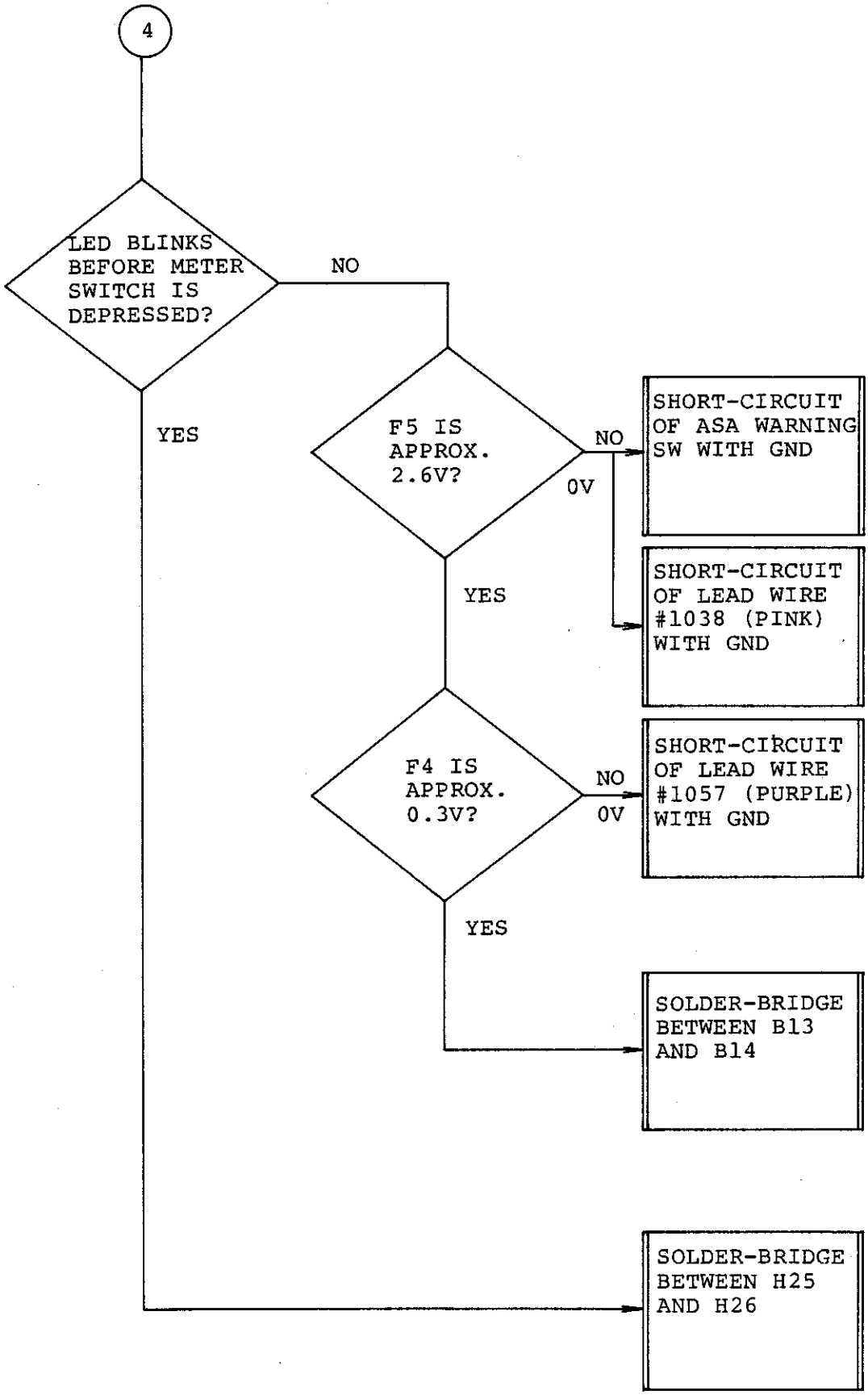

3
ELECTRIC POTENTIALS OF G2 AND G3 ARE THE SAME?
YES
SOLDER-BRIDGE BETWEEN G2 AND G3
NO
POTENTIAL DIFFERENCE: APPROX. 0.5V
SOLDER-BRIDGE BETWEEN B17 AND B18
MEASURE CONDUCTIVITY BETWEEN F8 AND GND
0Ω ?
YES
SHORT-CIRCUIT OF LEAD WIRE #1069 (YELLOW) WITH GND
NO
POOR SOLDERING OF B23
POOR SOLDERING OF LEAD OF TTL SPD
BREAKAGE OF LEAD WIRE #1050 (PURPLE)
BREAKAGE OF LEAD WIRE #1049 (BLUE)
POOR SOLDERING OF B24
POOR SOLDERING OF P9
SHORT-CIRCUIT OF B23 WITH B24

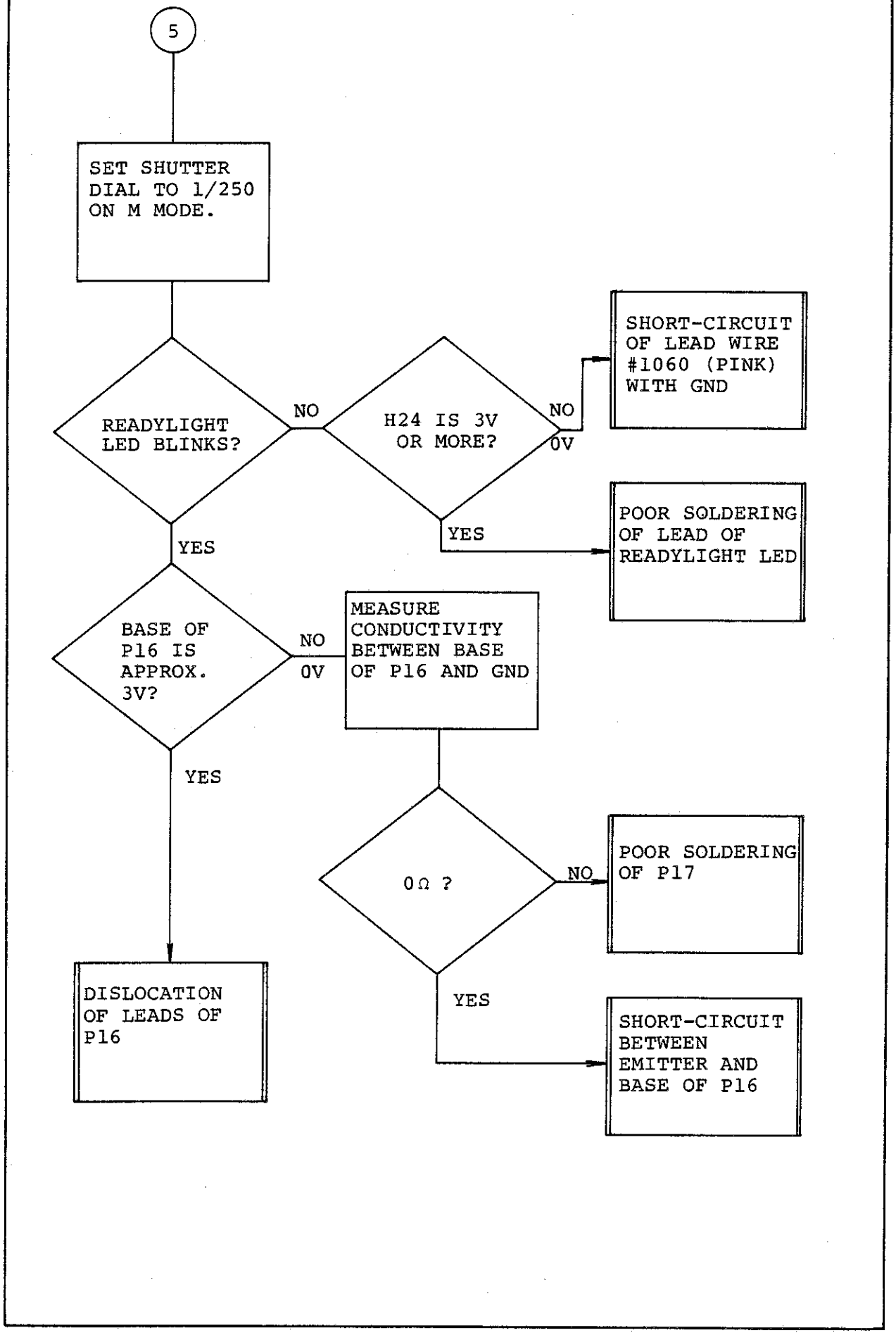

1
FAULT REMAINS REGARDLESS ASA DIAL SET
NO
ONLY ASA 800 OR MORE
SOLDER-BRIDGE BETWEEN B5 AND B6
YES
READYLIGHT LED BLINKS?
NO
LIGHTING UP
SOLDER-BRIDGE BETWEEN B20 AND B21
YES
SOLDER-BRIDGE BETWEEN B11 AND B12
SHORT-CIRCUIT OF LEAD WIRE #1049 (BLUE) WITH GND
POOR SOLDERING OF P7
POOR SOLDERING OF B20
POOR SOLDERING OF P4
1


1
G2 IS APPROX. 1.3V?
NO
G2 IS 1V OR LESS?
NO
APPROX. 2.7V
POOR SOLDERING OF G3
YES
YES
POOR SOLDERING OF B18
G3 IS 0V?
NO
POOR SOLDERING OF G2
YES
POOR SOLDERING OF B17
POOR SOLDERING OF G3 AND G4
F8 IS 0V?
NO
F8 IS APPROX. 0.5V?
NO
3V
SOLDER-BRIDGE BETWEEN B19 AND B20
YES
POOR SOLDERING OF A28
1

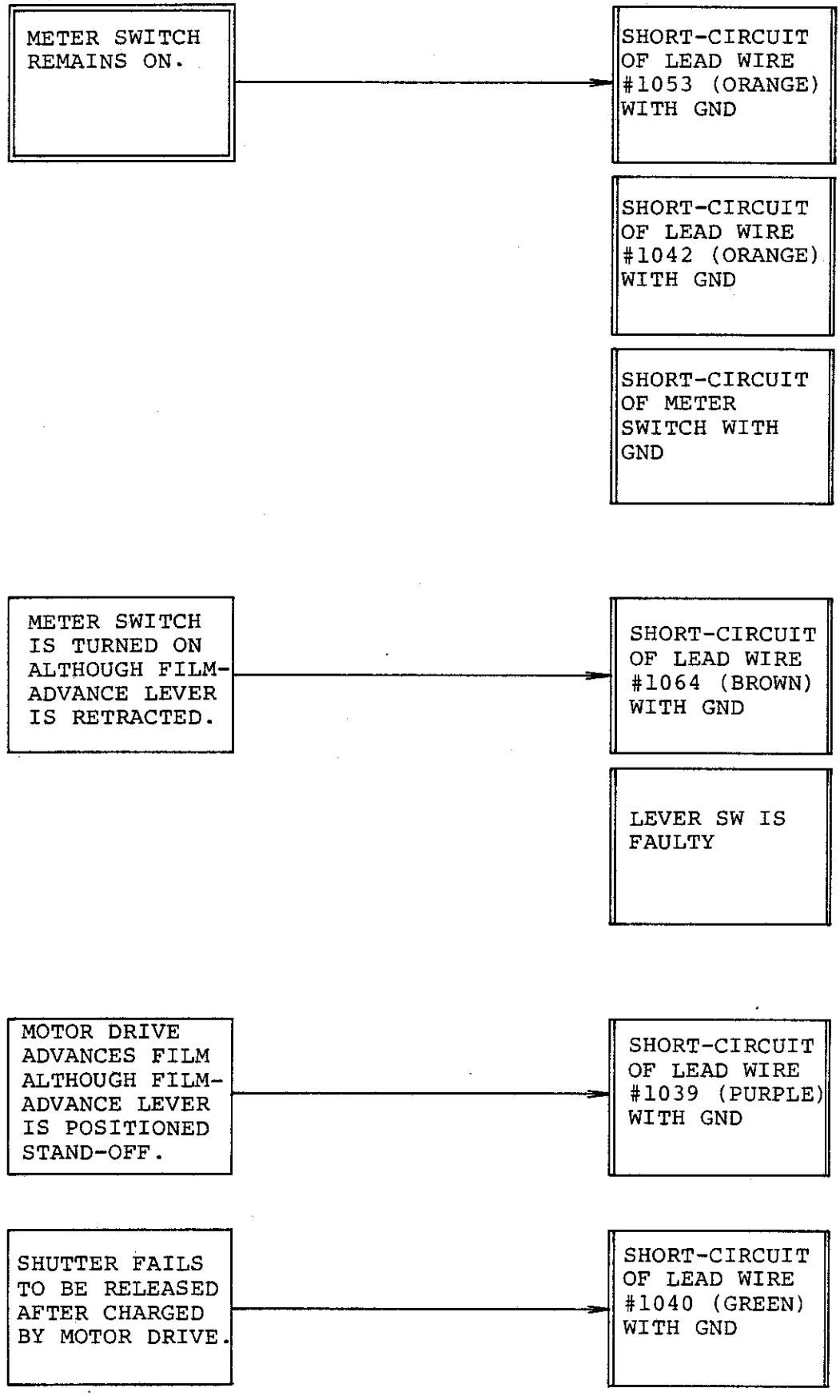

1
RELEASE SHUTTER AT 8 SEC ON M MODE. MEASURE F8 WHILE SHUTTER IS OPEN.
F8 IS APPROX. 0.6V?
NO
POOR SOLDERING OF B19
YES
F6 IS 0.3V OR LESS?
NO
SOLDER-BRIDGE BETWEEN B14 AND B15
YES
SHORT-CIRCUIT OF B23 WITH B24
SHORT-CIRCUIT OF LEAD WIRE #1059 (ORANGE) WITH GND

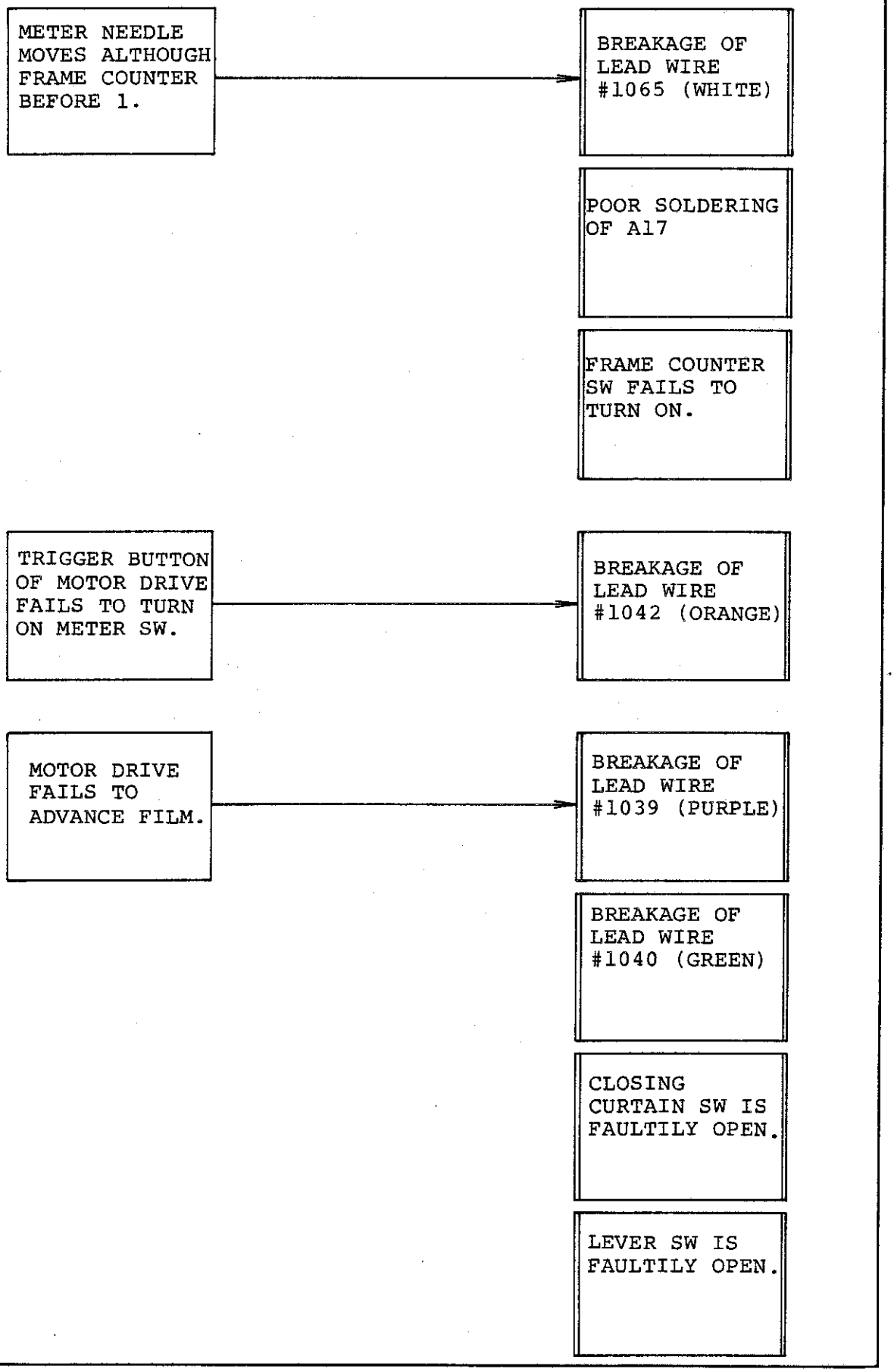

2
LED FOR ASA SET WARNING FAILS TO BLINK.
READYLIGHT LED REMAINS BLINKING.
READYLIGHT LED FAILS TO LIGHT.
4
5
F5 IS APPROX. 2.7V?
NO
POOR SOLDERING OF B13
YES
SET ASA DIAL TO 800.
F5 IS 0V?
NO
APPROX. 2.7V
BREAKAGE OF LEAD WIRE #1038 (PINK)
YES
POOR SOLDERING OF A5
POOR SOLDERING OF B12


4
LED BLINKS BEFORE METER SWITCH IS DEPRESSED?
NO
YES
F5 IS APPROX. 2.6V?
NO
0V
YES
SHORT-CIRCUIT OF ASA WARNING SW WITH GND
SHORT-CIRCUIT OF LEAD WIRE #1038 (PINK) WITH GND
F4 IS APPROX. 0.3V?
NO
0V
YES
SHORT-CIRCUIT OF LEAD WIRE #1057 (PURPLE) WITH GND
SOLDER-BRIDGE BETWEEN B13 AND B14
SOLDER-BRIDGE BETWEEN H25 AND H26

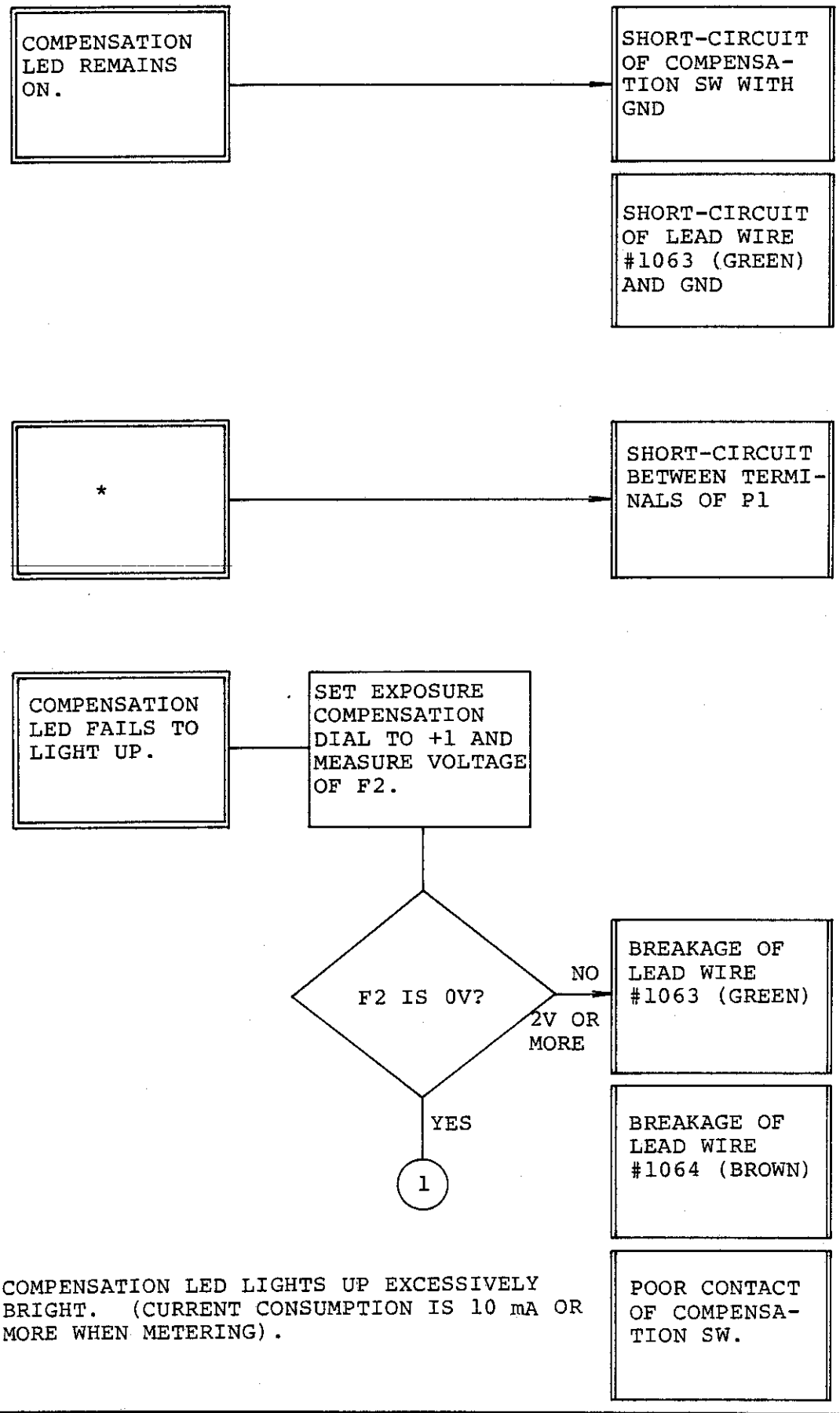

5
SET SHUTTER DIAL TO 1/250 ON M MODE.
READYLIGHT LED BLINKS?
NO
H24 IS 3V OR MORE?
NO
0V
SHORT-CIRCUIT OF LEAD WIRE #1060 (PINK) WITH GND
YES
POOR SOLDERING OF LEAD OF READYLIGHT LED
YES
BASE OF P16 IS APPROX. 3V?
NO
0V
MEASURE CONDUCTIVITY BETWEEN BASE OF P16 AND GND
YES
0Ω ?
NO
POOR SOLDERING OF P17
YES
SHORT-CIRCUIT BETWEEN EMITTER AND BASE OF P16
DISLOCATION OF LEADS OF P16

OTHER TROUBLES 1

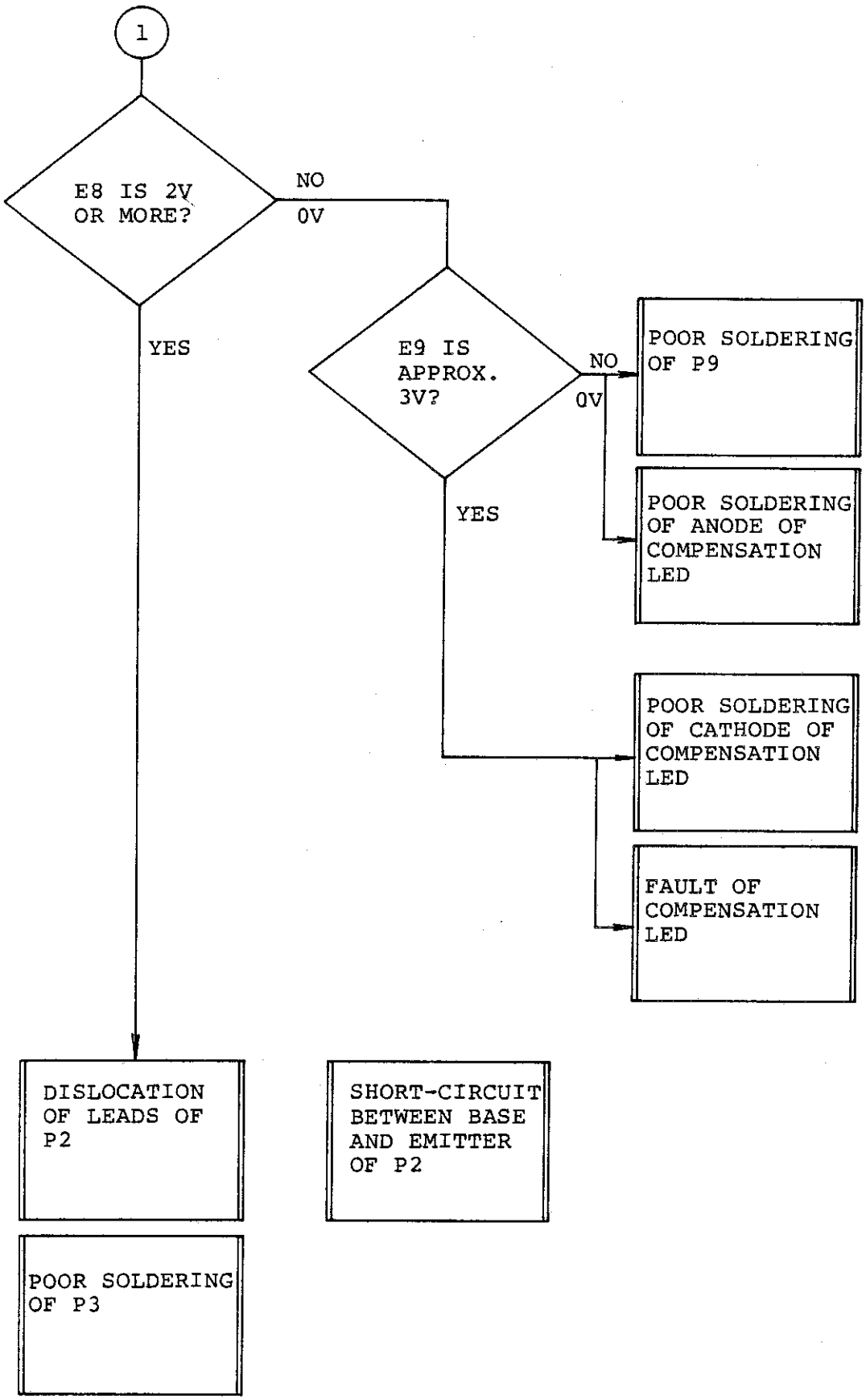

METER SWITCH REMAINS ON.
SHORT-CIRCUIT OF LEAD WIRE #1053 (ORANGE) WITH GND
SHORT-CIRCUIT OF LEAD WIRE #1042 (ORANGE) WITH GND
SHORT-CIRCUIT OF METER SWITCH WITH GND
METER SWITCH IS TURNED ON ALTHOUGH FILM-ADVANCE LEVER IS RETRACTED.
SHORT-CIRCUIT OF LEAD WIRE #1064 (BROWN) WITH GND
LEVER SW IS FAULTY
MOTOR DRIVE ADVANCES FILM ALTHOUGH FILM-ADVANCE LEVER IS POSITIONED STAND-OFF.
SHORT-CIRCUIT OF LEAD WIRE #1039 (PURPLE) WITH GND
SHUTTER FAILS TO BE RELEASED AFTER CHARGED BY MOTOR DRIVE.
SHORT-CIRCUIT OF LEAD WIRE #1040 (GREEN) WITH GND


METER NEEDLE MOVES ALTHOUGH FRAME COUNTER BEFORE 1.
BREAKAGE OF LEAD WIRE #1065 (WHITE)
POOR SOLDERING OF A17
FRAME COUNTER SW FAILS TO TURN ON.
TRIGGER BUTTON OF MOTOR DRIVE FAILS TO TURN ON METER SW.
BREAKAGE OF LEAD WIRE #1042 (ORANGE)
MOTOR DRIVE FAILS TO ADVANCE FILM.
BREAKAGE OF LEAD WIRE #1039 (PURPLE)
BREAKAGE OF LEAD WIRE #1040 (GREEN)
CLOSING CURTAIN SW IS FAULTILY OPEN.
LEVER SW IS FAULTILY OPEN.

OTHER TROUBLES 2

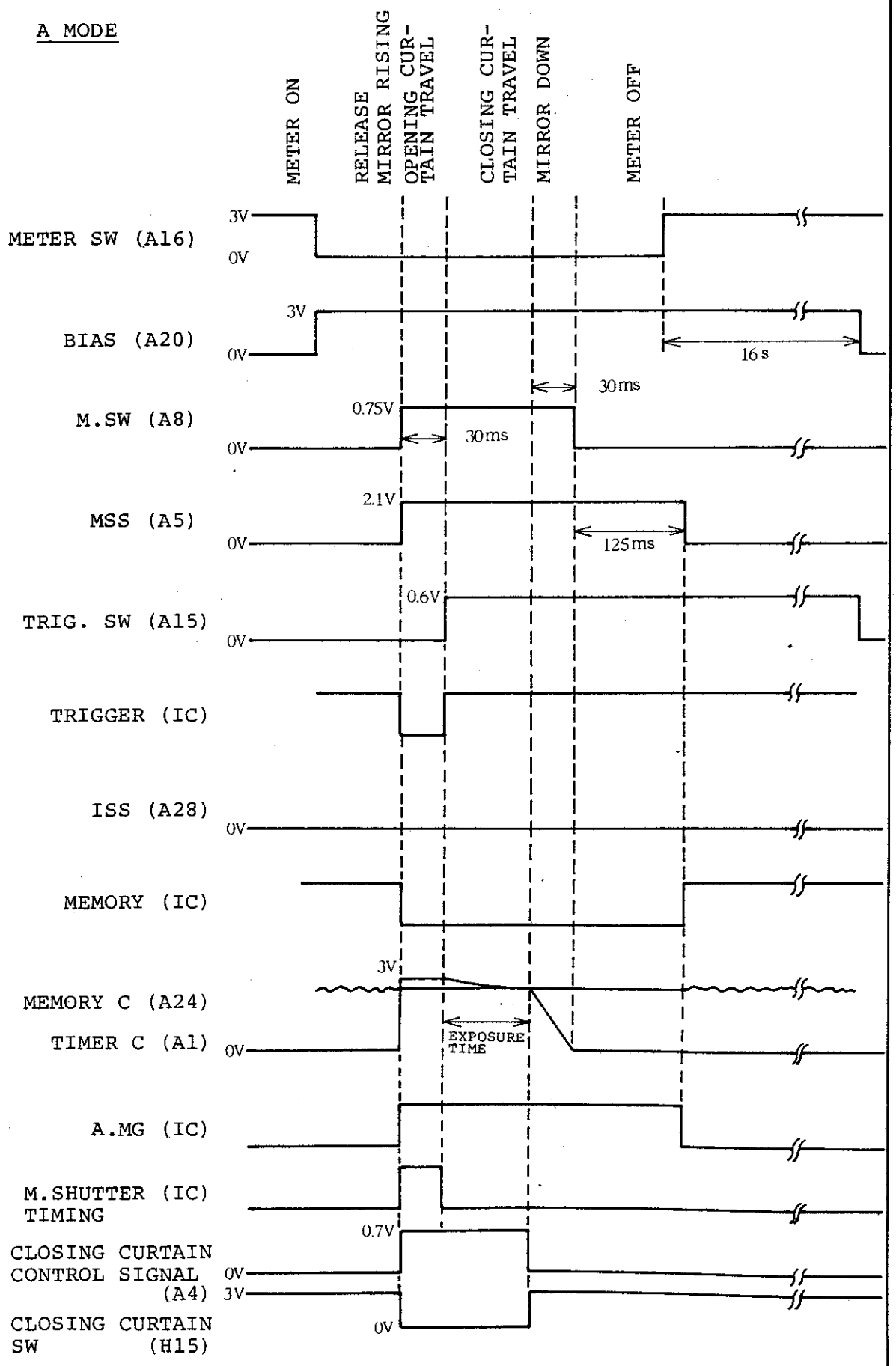

COMPENSATION LED REMAINS ON.
SHORT-CIRCUIT OF COMPENSATION SW WITH GND
SHORT-CIRCUIT OF LEAD WIRE #1063 (GREEN) AND GND
*
SHORT-CIRCUIT BETWEEN TERMINALS OF P1
COMPENSATION LED FAILS TO LIGHT UP.
SET EXPOSURE COMPENSATION DIAL TO +1 AND MEASURE VOLTAGE OF F2.
F2 IS 0V?
NO
2V OR MORE
BREAKAGE OF LEAD WIRE #1063 (GREEN)
YES
1
BREAKAGE OF LEAD WIRE #1064 (BROWN)
POOR CONTACT OF COMPENSATION SW.

* COMPENSATION LED LIGHTS UP EXCESSIVELY BRIGHT. (CURRENT CONSUMPTION IS 10 mA OR MORE WHEN METERING).

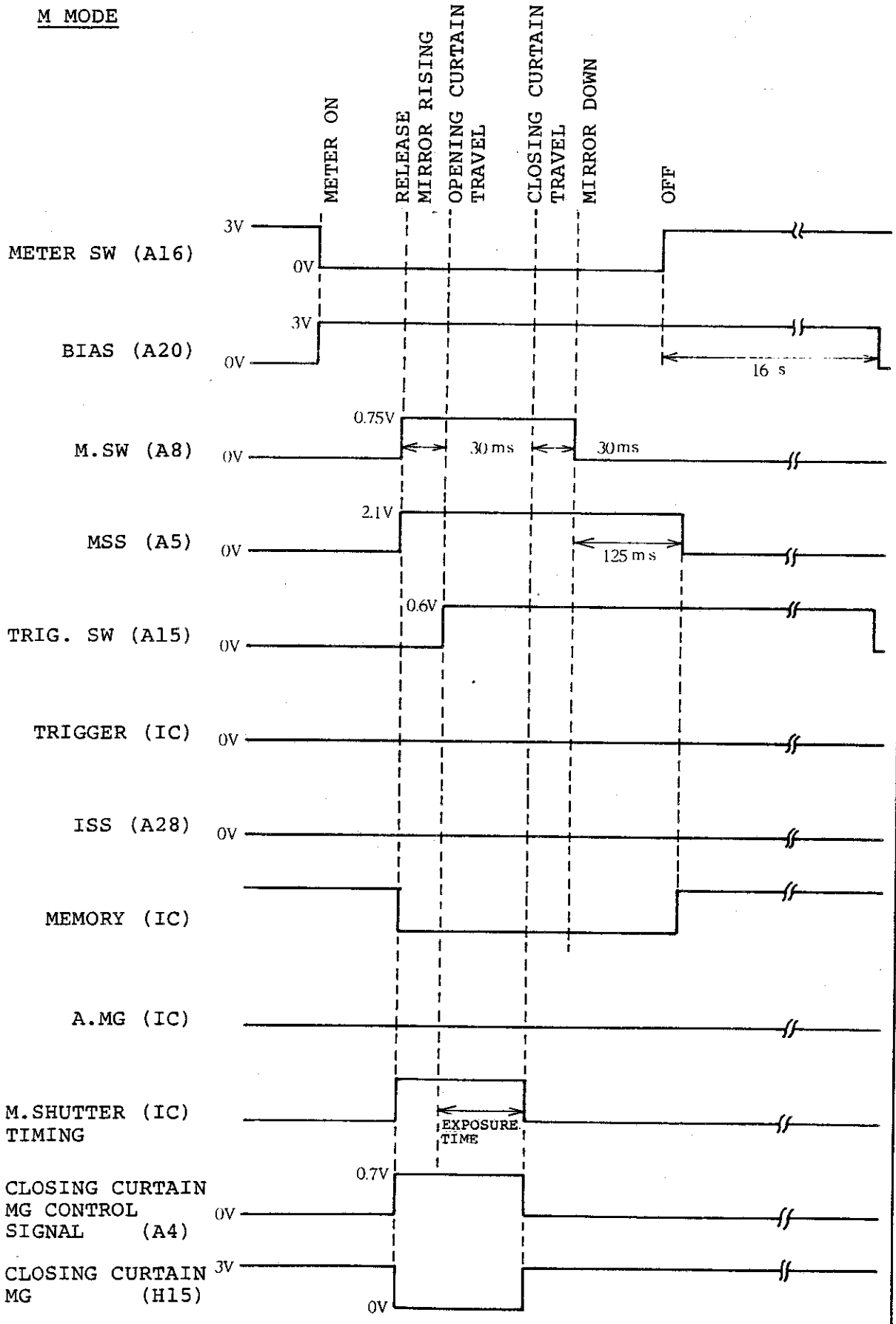

1
E8 IS 2V OR MORE?
NO
0V
YES
E9 IS APPROX. 3V?
NO
0V
YES
POOR SOLDERING OF P9
POOR SOLDERING OF ANODE OF COMPENSATION LED
POOR SOLDERING OF CATHODE OF COMPENSATION LED
FAULT OF COMPENSATION LED
DISLOCATION OF LEADS OF P2
POOR SOLDERING OF P3
SHORT-CIRCUIT BETWEEN BASE AND EMITTER OF P2

TIMING CHART

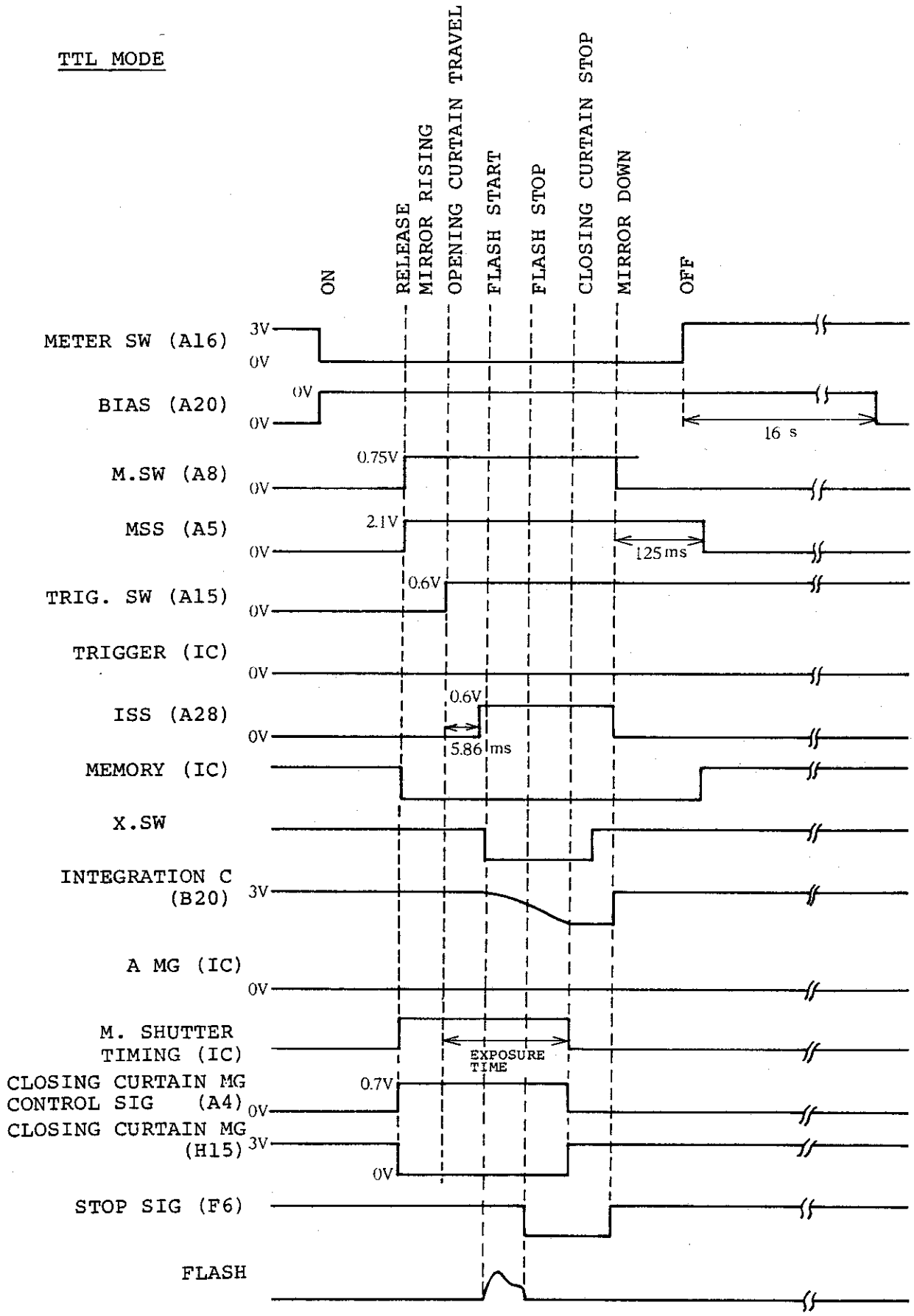
A MODE



M MODE


METER ON
RELEASE MIRROR RISING
OPENING CURTAIN TRAVEL
CLOSING CURTAIN TRAVEL
MIRROR DOWN
OFF
METER SW (A16)
3V
0V
BIAS (A20)
3V
0V
16 s
M.SW (A8)
0.75V
0V
30 ms
30 ms
MSS (A5)
2.1V
0V
125 ms
TRIG. SW (A15)
0.6V
0V
TRIGGER (IC)
0V
ISS (A28)
0V
MEMORY (IC)
A.MG (IC)
M.SHUTTER (IC) TIMING
EXPOSURE TIME
CLOSING CURTAIN MG CONTROL SIGNAL (A4)
0.7V
0V
CLOSING CURTAIN MG (H15)
3V
0V

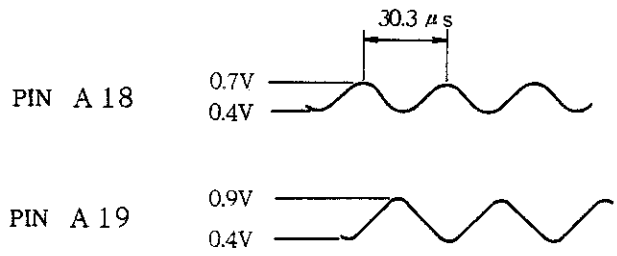
TTL MODE


ON
RELEASE
MIRROR RISING
OPENING CURTAIN TRAVEL
FLASH START
FLASH STOP
CLOSING CURTAIN STOP
MIRROR DOWN
OFF
METER SW (A16)
3V
0V
BIAS (A20)
0V
0V
16 s
M.SW (A8)
0.75V
0V
MSS (A5)
2.1V
0V
125 ms
TRIG. SW (A15)
0.6V
0V
TRIGGER (IC)
0V
ISS (A28)
0.6V
0V
5.86 ms
MEMORY (IC)
X.SW
INTEGRATION C (B20)
3V
A MG (IC)
0V
M. SHUTTER TIMING (IC)
EXPOSURE TIME
CLOSING CURTAIN MG CONTROL SIG (A4)
0.7V
0V
CLOSING CURTAIN MG (H15)
3V
0V
STOP SIG (F6)
FLASH

MEASURED VOLTAGES OF ICA / ICB TERMINALS

PIN	AUTOMATIC MODE				MANUAL MODE		B M250	REMARKS
	METER OFF	METER ON	METER HOLD	SELF-TIMER	METER HOLD	SELF-TIMER		
A 1	0	0	0	3 V	0	0	0	
A 2	0	0.24 V	0.24 V	0.24 V	0.24 V	0.24 V	0	
A 3	0	0.24 V	0.24 V	0.24 V	0.24 V	0.24 V	0	
A 4	0	0	0	0.7 V	0	0.7 V	0	
A 5	0	0	0	2.1 V	0	2.1 V	0	
A 6	0	0	0	0	0	0	0	GND
A 7	0	0	0	0	0	0	0	MEMORY LOCK 0.6 V
A 8	0	0	0	0.75 V	0	0.75 V	0	
A 9	0	0.86 V	0.69 V	0.69 V	0.69 V	0.69 V	0	GRAY CODE (HIGH)
A 10	0	0.6 V	0.6 V	0.6 V	0.6 V	0.6 V	0	
A 11	0	0.6 V	0.6 V	0.6 V	0.6 V	0.6 V	0	
A 12	0	0.86 V	0.69 V	0.69 V	0.69 V	0.69 V	0	
A 13	0	0.6 V	0.6 V	0.6 V	0.6 V	0.6 V	0	
A 14	0	0	0	0	0	0	0	
A 15	0	0	0	0.6 V	0	0.6 V	0	
A 16	3 V	0	3 V	3 V	3 V	3 V	3 V	
A 17	0	0.75 V	0.75 V	0.75 V	0.75 V	0.75 V	0	FRAME COUNTER "S"~"O" 0 V
A 18	0.56 V	0.56 V	0.56 V	0.56 V	0.56 V	0.56 V	0.56 V	
A 19	0.6 V	0.6 V	0.6 V	0.6 V	0.6 V	0.6 V	0.6 V	
A 20	0	3 V	3 V	3 V	3 V	3 V	0	
A 21	3 V	2.33 V	2.33 V	2.33 V	2.33 V	2.33 V	3 V	
A 22	2.5 V	1.57 V	1.57 V	1.57 V	1.57 V	1.57 V	2.5 V	
A 23	2.5 V	1.5 V ~ 2.3 V					2.5 V	
A 24		2.2 V ~ 2.9 V						
A 25	3 V	2.27 V	2.27 V	2.27 V	2.27 V	2.27 V	3 V	
A 26	3 V	3 V	3 V	3 V	3 V	3 V	3 V	Vcc
A 27	3 V	1.9 V ~ 2.6 V						
A 28	0	0	0	0.6 V	0	0.6 V	0	TTL

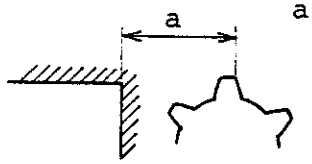
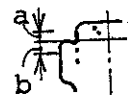
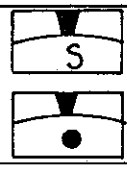
QUARTZ OSCILLATION WAVE FORM



PIN	AUTOMATIC MODE				MANUAL MODE		B M250	REMARKS
	METER OFF	METER ON	METER HOLD	SELF-TIMER	METER HOLD	SELF-TIMER		
B 1	0	0.51 V	0.51 V	0.51 V	0.51 V	0.51 V	0	
B 2	0	0.51 V	0.51 V	0.51 V	0.51 V	0.51 V	0	
B 3	0	0	0	0	0	0	0	GND
B 4	0	0.24 V	0.24 V	0.24 V	0.24 V	0.24 V	0	
B 5	0	0.24 V	0.24 V	0.24 V	0.24 V	0.24 V	0	
B 6	0	0.69 V	0.69 V	0.69 V	0.69 V	0.69 V	0	ASA 100
B 7	3 V	2.5 V ~ 2.9 V					3 V	
B 8	3 V	2.0 V ~ 2.8 V					3 V	
B 9	0			2.9 V			0	
B 10	0	3 V	3 V	3 V	3 V	3 V	0	
B 11	0	0	0	0	0	0	0	GND
B 12	0	0	0	2.1 V	0	2.1 V	0	=5
B 13	0	2.8 V	2.8 V	2.8 V	2.8 V	2.8 V	0	
B 14	0	1.55 V	1.55 V	1.55 V	1.55 V	1.55 V	0	
B 15	0	0	0	0	0	0	0	
B 16	3 V	3 V	3 V	3 V	3 V	3 V	3 V	Vcc
B 17	0	1.25 V	1.25 V	1.25 V	1.25 V	1.25 V	0	
B 18	0	0.73 V	0.73 V	0.73 V	0.73 V	0.73 V	0	
B 19	0	0	0	0.6 V	0	0.6 V	0	=A 28
B 20								
B 21	3 V	3 V	3 V	3 V	3 V	3 V	3 V	
B 22								
B 23	0	0.24 V	0.24 V	0.24 V	0.24 V	0.24 V	0	
B 24	0	0.24 V	0.24 V	0.24 V	0.24 V	0.24 V	0	

INSPECTION STANDARDS FOR REPAIR

INSPECTION STANDARDS FOR REPAIR

	Item	Standard	Tool
FILM-ADVANCE MECHANISM / SHUTTER RELEASE	Film-advance lever torque	Film unloaded: 2.0kg-cm or less Film loaded : 3.5kg-cm or less	Torque meter
	Spool	Torque : 90 - 140g-cm Slipping load: 144 - 224g	J15003 J5019
	Sprocket	 a: Distance from right side of aperture to right side of tip of sprocket tooth 32.4±0.4mm Play of tips of sprocket teeth: 0.8mm or less Reverse action after winding : 1.2mm or less	J18064-1
	MD coupling	Start angle: -1° - +2° Wound angle: +132° - +138° Torque : Equivalent to those of film advance lever or less	
	Rewind button	Distance from bottom cover Original position: 0.2±0.2mm Set position : 2.7mm	Slide caliper
		Set power: 100g or less	
	Rewind knob	Friction torque: 8 - 15g-cm	J5018
	Shutter button	Meter SW-On power: 200g or less Release power : 250 - 400g	J5019
		 Whole stroke : 2.5±0.3mm Release stroke: 0.4mm or less (b) Meter SW-ON stroke: 0.3mm or more (a)	
SHUTTER DIAL	Dial turning	To be smooth movement and click	Torque meter
	Shutter dial look button	Stroke (after lock released): 0.1mm or more To be locked securely	
FRAME COUNTER	Counter scale alignment	 To be aligned 1/2 or more of one full calibration figure	
	Counter SW	To be on when counter reaches the position between "1" and the second dot from "S"	
SELF-TIMER	Self-timer	Delay action time: 8 - 14 sec. To be reset by reversing lever Original position: Vertical ±1mm	
	Memory SW	To be on before limit of self-timer lever turning	

SHUTTER SPEEDS ACCURACY

Exposure time on auto mode

ASA 100
EV4-15

SHUTTER SPEED	STANDARD	TOLERANCE (ms)	
4000	0.244	±0.65 EV	0.156 - 0.383
2000	0.488		0.311 - 0.766
1000	0.977		0.622 - 1.532
500	1.953	±0.5 EV	1.38 - 2.76
250	3.906		2.76 - 5.52
125	7.81		5.52 - 11.05
60	15.63		11.05 - 22.1
30	31.25		22.1 - 44.2
15	62.5		44.2 - 88.4
8	125		88.4 - 176.8
4	250		176.8 - 354
2	500		354 - 707
1	1000		707 - 1414
2	2000		1414 - 2830
4	4000	±0.65 EV	2550 - 6280
8	8000		5100 - 12550

Exposure time on manual mode

SHUTTER SPEED	STANDARD	TOLERANCE (ms)	
M250	3.906	±0.45 EV	2.86 - 5.34
4000	0.244		0.179 - 0.334
2000	0.488		0.357 - 0.667
1000	0.977		0.715 - 1.334
500	1.953		1.430 - 2.67
250	3.906		2.86 - 5.34
125	7.81	±0.3 EV	6.35 - 9.62
60	15.63		12.69 - 19.24
30	31.25		25.4 - 38.5
15	62.5		50.8 - 76.9
8	125		101.5 - 153.9
4	250		203 - 308
2	500		406 - 616
1	1000		812 - 1231
2	2000		1625 - 2460
4	4000		3250 - 4930
8	8000		6500 - 9850

Exposure unevenness	1/4000 - 1/2000: 0.5EV or less 1/1000 - 1/250 : 0.25EV or less 1/125 - 8, B : 0.2EV or less	J19040 (SF-4DNS)
Variation	1/4000 - 1/2000: 0.45EV or less	J18041-1 (50/F1.4)
Difference between two adjacent settings	1±0.65EV (A mode) 1±0.55EV (Manual mode)	